#### Environmental Documents

Request 13: Documents given to contractors regarding environmental issues at West Los Angeles

81. Soil Investigation Report by Locus (Nov 21, 2000)



Report

Soil Investigation Report

Brentwood School Athletic Fields Grading Project and Recreation Facility Development Los Angeles, California

Prepared by:

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Approved by:

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#### SOIL INVESTIGATION REPORT

### BRENTWOOD SCHOOL ATHLETIC FIELDS GRADING PROJECT AND RECREATION FACILITY DEVELOPMENT

#### LOS ANGELES, CALIFORNIA

#### 1. Introduction

This Soil Investigation Report (Report) has been prepared by Locus Technologies (Locus) under contract to Coastal Safety and Health Services, Inc. of Hermosa Beach, California (Coastal) on behalf of the Veterans Administration Greater Los Angeles Healthcare System (GLAHS) in Los Angeles, California. The GLAHS is located at 11301 Wilshire Boulevard in the City of Los Angeles, California (Figure 1).

The purpose of the soil investigation was to provide additional characterization for a portion of the GLAHS property known as the Brentwood School Lease Area (Lease Area). The Lease Area is located at the northwest corner of the GLAHS Property and is approximately 20 acres in size (Figure 2). The Lease Area is being developed into athletic facilities, which will be used by the adjacent Brentwood School.

An Environmental Assessment (EA) was prepared by Locus under contract to Coastal on behalf of the GLAHS on 23 October 2000 (Locus, 2000a). The EA concluded that no significant impacts to the human environment were present at the Lease Area. One of the recommended mitigation measures was confirmatory soil sampling to document whether any significant impacts exist due to apparent medical incinerator ash, reported diesel fuel in soil, and construction debris.

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A Sampling and Analysis Plan (SAP) was prepared by Locus under contract to Coastal on behalf of the GLAHS on 11 October 2000 (Locus, 2000b). Sampling activities were performed in accordance with the procedures described in the SAP.

Chapter 2 of this document discusses the soil sampling field activities. Chapter 3 discusses the soil sampling analytical results. Surveyed coordinates for soil borings at the Lease Area are included as Appendix A. Soil boring logs are included as Appendix B. The health and safety plan for the soil investigation is included as Appendix C. The laboratory analytical data sheets are included as Appendix D. Historical Metals and Total Petroleum Hydrocarbons (TPH) as Diesel Chemical Concentrations in Discrete Soil Samples are summarized in Appendix E. The Asbestos-Containing Material Survey is included as Appendix F. Asbestos laboratory analytical data sheets are included as Appendix G. Field notes are included as Appendix H.

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Grading Project & Recreation
Facility Development
Los Angeles, California



#### 2. SOIL SAMPLING FIELD ACTIVITIES

Confirmatory soil samples were collected to determine whether any significant impacts exist due to reported diesel fuel in soil, apparent medical incinerator ash, and construction debris. As discussed in the SAP (Locus, 2000b), soil samples were collected from near surface soils to document baseline conditions of fill materials that were placed within the Lease Area. The Lease Area is divided into an upper terrace (upper bench) and a lower terrace (lower bench).

A single soil sample was planned to be collected from each of sixty shallow soil borings arranged in a grid pattern on the lower bench only. The GLAHS site superintendent decided to relocate twenty of the soil borings from the lower bench to the upper bench in order to characterize the entire Lease Area (Figure 3). At the time of the soil sampling investigation, grading activities for construction of the athletic facilities was ongoing. Consequently, some of the soil borings had to be relocated due to interference with utility trenches or stockpiles of construction materials. At the direction of the GLAHS site superintendent, proposed soil borings locations within the footprint of the tennis and basketball courts were also relocated to other areas. Figure 3 shows the final soil boring locations at the Lease Area.

Soil samples were collected at a depth of approximately three feet below ground surface (bgs). Two discrete soil samples collected from adjacent soil borings, as much as possible, were combined into a single composite soil sample. A total of thirty composite soil samples collected from near surface soils were analyzed for TPH as diesel using EPA Method 8015.

Apparent medical incinerator ash was encountered during grading operations at the upper bench (Locus, 2000a). The ash was excavated and stockpiled with unacceptable fill material outside the Lease Area on GLAHS property during prior grading operations associated with construction of the athletic facilities. In order to confirm that ash was removed from the upper bench, six soil borings were drilled at the upper bench (see Inset A, Figure 3). A single soil sample was collected from each of six soil borings at the

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interface between fill and native material, which was approximately eleven feet bgs. These six soil samples were analyzed for CAM 17 Metals using EPA Method 7000 series.

Construction debris was observed on the west bank of the former arroyo on GLAHS property, immediately south of the Lease Area. Nine samples of this debris were collected and analyzed for the presence of asbestos.

All sixty-six soil boring locations were surveyed by a licensed surveyor. The coordinates for the soil borings are included as Appendix A.

Soil samples were collected by using a Geoprobe drill rig. The lithology of the upper three feet for each soil boring was recorded on a boring log. The soil boring logs are included as Appendix B.

All field activities were performed in accordance with the health and safety practices described in the Site Specific Health and Safety Plan (HSP). The HSP is included as Appendix C.

The drill rig was decontaminated between each soil boring, in accordance with Section 5.4 of the SAP (Locus, 2000b). Decontamination fluids were collected and stored in a closed top drum. TPH as diesel and metals were not detected in the decontamination fluids; consequently, the decontamination fluids were disposed at an off-site disposal facility as non-hazardous waste.

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#### 3. SOIL SAMPLING ANALYTICAL RESULTS

Confirmatory composite soil samples were collected from sixty soil borings at the Lease Area and were analyzed for TPH as Diesel. Discrete confirmatory soil samples were collected from six soil borings located at the upper bench where apparent medical incinerator ash was encountered during prior grading operations. Samples of construction debris located on GLAHS property, immediately adjacent to the Lease Area, were collected and analyzed for asbestos. The results of these analyses are discussed below.

#### 3.1. Total Petroleum Hydrocarbon as Diesel Analytical Results

Thirty composite soil samples were collected from near surface soils and were analyzed for TPH as diesel using EPA Method 8015. TPH as diesel was detected in three composite soil samples at concentrations ranging from 10.6 milligrams per kilogram (mg/kg) to 20.5 mg/kg (Table 1). The three composite soil samples were collected from the following three pairs of soil borings: a) SB21/SB25; b) SB29/SB30; and c) SB44/SB51. All six of these soil borings are located in the lower bench. These detected concentrations of TPH as diesel are consistent with TPH as diesel analytical data for soil samples collected by others at the Lease Area and the surrounding areas in September 1999 (Appendix E). None of the soil samples exhibited visible staining or odors indicative of diesel fuel. Based on the detected concentrations of TPH as diesel, no further action is warranted.

#### 3.2. CAM 17 Metals Analytical Results

Six soil borings were drilled at the location where apparent medical incinerator ash was encountered during prior grading operations. These six soil borings were located at the direction of the GLAHS site superintendent. A soil sample was collected from each soil boring at the interface between native soil and fill material. These soil samples were analyzed for CAM 17 metals using EPA Method 7000 series. The detected metals concentrations are reported in Table 2. All of the detected metals concentrations were less than approximately three percent of the respective Total Threshold Limit Concentrations (TTLC). TTLC

Locus

are found in the California Code of Regulations, Title 22, Section 66261.24. TTLC is the threshold concentration at which point the State of California considers a waste to be hazardous, and must be handled as such. TTLCs do not apply in this situation, but provide a reference standard for comparison purposes. These detected metals concentrations are consistent with metals concentrations detected in soil samples collected by others at the Lease Area and surrounding areas in September 1999 (Appendix E). Based on the detected concentrations of metals in these six soil samples, no further action is warranted where apparent medical incinerator ash was previously encountered during prior grading operations.

#### 3.3. Asbestos Analytical Results

Nine samples of construction debris were collected from the debris pile located on the west bank of the arroyo, immediately south of the Lease Area. Two samples contained detectable levels of asbestos; however, the debris is not in a friable state. One of the samples with detectable asbestos was a 10-inch diameter concrete pipe. The majority of the pipe is buried in the bank of the arroyo and approximately one foot of the end of the pipe juts out of the bank. The other sample with detectable asbestos was a piece of white floor tile. The samples were collected by a certified asbestos consultant, and his opinion is that none of the materials sampled have the potential to significantly expose users of the athletic facilities located north of the debris pile. The Asbestos-Containing Material Survey is included as Appendix F. The asbestos laboratory data sheets are included as Appendix G.

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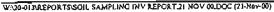
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Grading Project & Recreation
Facility Development
Los Angeles, California



#### REFERENCES

Locus Technologies, 2000a, "Environmental Assessment, Brentwood School Athletic Fields, Grading Project and Recreation Facility Development, Los Angeles, California," prepared for Veterans Administration Medical Center, 23 October.

Locus Technologies, 2000b, "Sampling and Analysis Plan, Brentwood School Athletic Fields, Grading Project and Recreation Facility Development, Los Angeles, California," prepared for Veterans Administration Medical Center, 11 October.







TOTAL PETROLEUM HYDROCARBONS AS DIESEL CONCENTRATIONS IN COMPOSITE SOIL SAMPLES VETERANS ADMINISTRATION GREATER LOS ANGELES HEALTHCARE SYSTEM LOS ANGELES, CALIFORNIA

Date Sampled	Discrete Sample No. 1	Discrete Sample No. 2	SAMPLE TYPE	SAMPLE LOCATION	Total Petroleum Hydrocarbons as Diesel (mg/kg)
26-Oct-00	SB1	SB3	COMPOSITE PAIR	UPPER BENCH	<10
26-Oct-00	SB4	SBS	COMPOSITE PAIR	UPPER BENCH	<10
26-Oct-00	SB6	SB7	COMPOSITE PAIR	UPPER BENCH	<10
26-Oct-00	SB8	SB9	COMPOSITE PAIR	UPPER BENCH	<10
26-Oct-00	SB10	SB11	COMPOSITE PAIR	UPPER BENCH	<10
26-Oct-00	SB12	SB13	COMPOSITE PAIR	UPPER BENCH	<10
26-Oct-00	SB14	SB15	COMPOSITE PAIR	UPPER BENCH	<10
26-Oct-00	SB16	SB17	COMPOSITE PAIR	UPPER BENCH	<10
26-Oct-00	SB18	SB19	COMPOSITE PAIR	UPPER BENCH	<10
26-Oct-00	SB20	SB2	COMPOSITE PAIR	UPPER BENCH	<10

TOTAL PETROLEUM HYDROCARBONS AS DIESEL CONCENTRATIONS IN COMPOSITE SOIL SAMPLES VETERANS ADMINISTRATION GREATER LOS ANGELES HEALTHCARE SYSTEM LOS ANGELES, CALIFORNIA

Date Sampled	Discrete Sample No. 1	Discrete Sample No. 2	SAMPLE TYPE	SAMPLE LOCATION	Total Petroleum Hydrocarbons as Diesel (mg/kg)
26-Oct-00	SB21	SB25	COMPOSITE PAIR	LOWER BENCH	20.5
26-Oct-00	SB22	SB23	COMPOSITE PAIR	LOWER BENCH	<10
26-Oct-00	SB24	SB31	COMPOSITE PAIR	LOWER BENCH	<10
26-Oct-00	SB27	SB28	COMPOSITE PAIR	LOWER BENCH	<10
26-Oct-00	SB29	SB30	COMPOSITE PAIR	LOWER BENCH	10.6
27-Oct-00	SB26	SB32	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB33	SB34	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB35	SB36	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB37	SB38	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB39	SB40	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB41	SB42	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB43	SBS0	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB44	SB51	COMPOSITE PAIR	LOWER BENCH	16.2
27-Oct-00	SB45	SB52	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB46	SB47	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB48	SB49	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB53	SB54	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SBSS	SBS6	COMPOSITE PAIR	LOWER BENCH	01>
27-Oct-00	SB57	SBS8	COMPOSITE PAIR	LOWER BENCH	<10
27-Oct-00	SB59	SB60	COMPOSITE PAIR	LOWER BENCH	<10



# TOTAL PETROLEUM HYDROCARBONS AS DIESEL CONCENTRATIONS IN COMPOSITE SOIL SAMPLES VETERANS ADMINISTRATION GREATER LOS ANGELES HEALTHCARE SYSTEM LOS ANGELES, CALIFORNIA

Date	Discrete Sample	Discrete Sample	THE STATE OF THE S		Total Petroleum Hydrocarbons as Diesel
26-Oct-00	SB61	7.00.	DISCRETE SAMPLE	UPPER BENCH	(11/9/kg) <10
26-Oct-00	SB62	ı	DISCRETE SAMPLE	UPPBR BENCH	<10
26-Oct-00	SB63	•	DISCRETE SAMPLE	UPPER BENCH	<10
26-Oct-00	SB64	-	DISCRETE SAMPLE	UPPER BENCH	01>
26-Oct-00	SB65	•	DISCRETE SAMPLE	UPPER BENCH	<10
26-Oct-00	SB66	-	DISCRETE SAMPLE	UPPER BENCH	<10

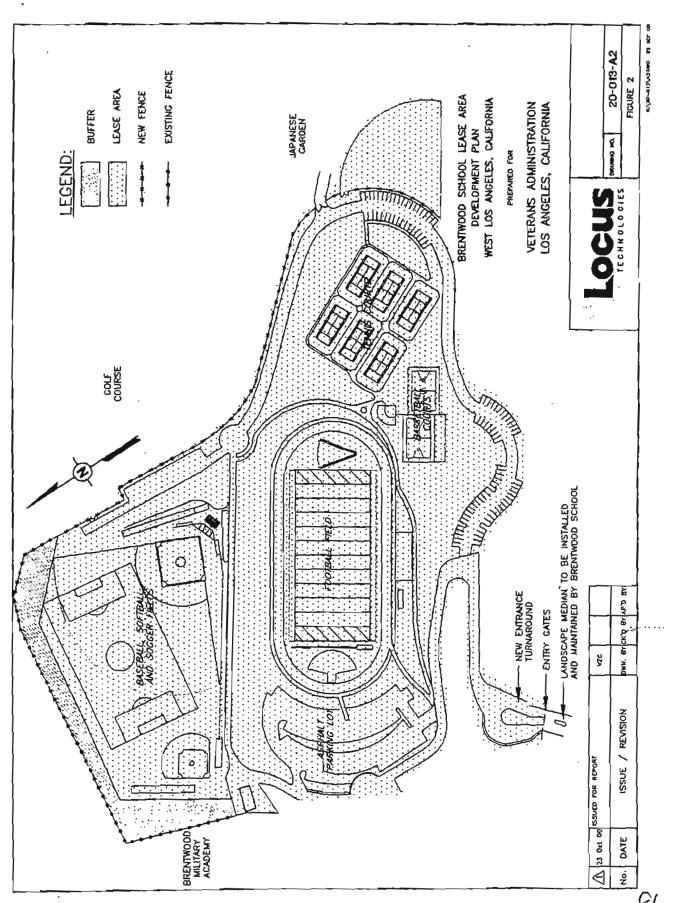
## METALS CONCENTRATIONS IN DISCRETE SOIL SAMPLES AT THE FORMER ASH PIT VETERANS ADMINISTRATION GREATER LOS ANGELES HEALTHCARE SYSTEM LOS ANGELES, CALIFORNIA

Date Sampled	CAM 17 Metals	Total Threshold Limit Concentration (mg/kg)	Average Concentration (mg/kg)	Lab ID No. Al10114-31 SB-61	Lab ID No. All 0114-32 SB-62	Lab ID No. Alio114-33 SB-63	Lab ID No. Ali 0114-34 SB-64	Lab ID No. AI10114-35 SB-65	Lab ID No. A110114-36 SB-66
26-Oct-00	Autimony	200	14	14	17	15	13	11	14
26-Oct-00	Arsenic	800	2	2	4	2	1	1	2
26-Oct-00	Barium	10,000	106	126	139	176	88	69	88
26-Oct-00	Beryllium	75	2.5	2.5	2.5	<2.5	2.5	2.5	<2.5
26-Oct-00	Cadmium	100	<2.5	<2.5	4.5	2.5	4.5	2.5	4.5
26-Oct-00	Chromium	2,500	33	37	31	32	28	30	37
26-Oct-00	Cobalt	8,000	9	5	7	6	9	3	6
26-Oct-00	Copper	2,500	18	18	28	22	14	11	17
26-Oct-00	Lead	1,000	15	9	19	7	Φ	3	6
26-Oct-00	Mercury	20	0	<0.03	0	<0.03	<0.03	0	0
26-Oct-00	Molydenum	3,500	\$	\$	۵	۵	۵	\$	۵.
26-Oct-00	Nickel	2,000	15	15	16	. 20	12	∞	21
26-Oct-00	Selenium	100	<0.5	<0.5	<0.5	<0.5	<0.5	€05	<0.5
26-Oct-00	Silver	800	<2.5	<2.5	42.5	2.5	2.5	25	2.5
26-Oct-00	Thallium	700	13	∞	12	11	9	2.5	15
26-Oct-00	Vanadium	2,400	42	51	45	53	36	36	32
26-Oct-00	Zinc	5,000	45	42	86	37	38	23	33

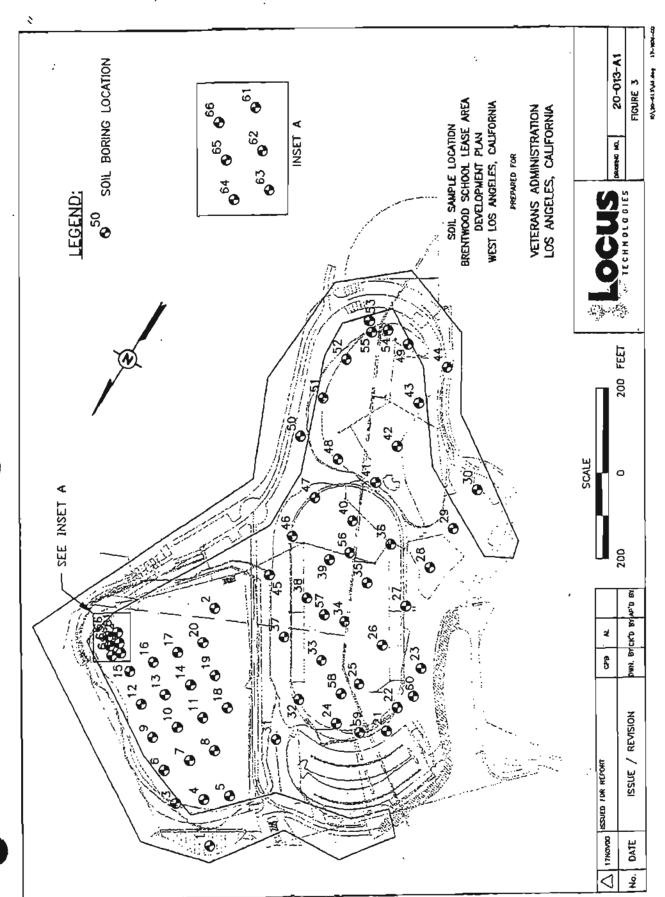
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#### Surveying & Drafting Services

434 North Vista Street, Last Angeles, CA 90036

Ofer Shapira State Licensed Land Surveyor B A. Goodesy & Cartography

#### FAX COVER SHEET

Total pages transmitted including cover page: 3

Date:

October 26, 2000

To:

Matt

Fax:

From:

Ofer Shapira

#### Comments:

Attached is the list of coordinates of the soil borings at Brentwood School lease area. If you have any questions please call me at

Sincerely,

Ofer Shapira

Tol Yax: 0

October 26, 2000

#### SOIL BORINGS LOCATION AT BRENTWOOD SCHOOL LEASE AREA

Date of survey: October 25, 2000

Boring	Northing	Easting	Ground Elevation
	UPPE	R BENCH	
ໍ 1	4136960.10	4146517.88	487.34
2	4136490.19	4146789,58	467,77
3	4136915.50	4146633.14	471.41
4 1	4136876.69	4146584.06	471.12
5	4136839.75	4146536.94	470.80
6	4136864.91	4146695.30	470.87
7	4136816,90	4146657.58	470.53
8	4136769.87	4146620.48	470.23
9	4136814.43	4146757.15	470.57
10	4136766.90	4146720.02	470.19
11	4136719.05	4146682.45	469.65
12	4136763.88	4146819.19	470,26
13	4136716.77	4146782.30	470.33
14	4136669.40	4146744.98	469.45
15	4 <b>1367</b> 13.45	4146881.34	469,71
16	4136666.42	4146844.57	469.28
17	4136819.29	a 4146808.12	468.92
18	4136671.96	4146645.60	469.22
19	4136622.44	4146707.99	468.88
20	4136572.09	4146771.49	468.42
	LOWER	RBENCH	
21	4136522.94	4146293.86	433,75
22	4136465.00	4146300.00	430.47
23	4136360.00	4146300.00	445.86
24	4136570.00	4146405.00	431.00
25	.4136455.00	4146405.00	431.29
26	4136360.00	4146405.00	431.17
27	4136255.00	4146405.00	433.81

28	4136150.00	4146405.00	441.97
29	4136045.00	4146405.00	437.37
30	4135940.00	4146405.00	443.12
31	4136675.00	4146510.00	449.06
32	4136570.00	4146510.00	430.93
33	4136465.00	4146510.00	431.42
34	4136360.00	4146510.00	431.73
35	4136255.00	4146510.00	431.48
36	4136150.00	4146510.00	430,49
37	4136465.00	4146615.00	436.28
38	4136360.00	4146615.00	430.97
39	4136255.00	4146615.00	431.49
40	4136150.00	4146615.00	431,13
41	4136045,00	4146615.00	426.78
42	4135946.71	4146616.95	424.97
43 .	4135834.77	4146627.40	424.29
44	4135730.00	4146615.00	422.88
45	4136360.00	4146720.00	455.69
46	4136255.00	4146720.00	431.14
47	4136150.00	4146720.00	431.02
48	4136045.00	4146720.00	427.64
49	4135730.00	4146720.00	428.03
50	4136045.00	4146825.00	448.57
51	4135940.00	4146825.00	425.95
52	4135835.00	4146825.00	<b>426</b> .34
53	4135730.00	4146825.00	<b>425.83</b>
54	4135726.70	4146777.05	428.29
55	4135749.81	4146807.00	425.90
56	4136216.86	4146582.45	431.42
57	4136370.72	4146558.76	431.36
58	4136505.B5	4146430.07	431.27
59	4136558.62	4146346.42	430.75
60	4136423.39	4146282.11	437.00
	ASH		
61	4136651.16	4146952.34	468.90
62	4136670.25	4146935.92	469.35
63	4136687.55	4146920.57	469.36
64	4136702.65	4146935.37	469.35
65	4136685.64	4146951.11	469.48
66	4136669.29	4146965.89	469.12

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PR	OJEC	Γ: 2	1397 VA	. Hospita				LOG OF	BOREHOL	E: \$8-1-UB
	RING					4146517	.88			<del></del>
	ILLING							START DAT	TE: 10/26/00	END DATE: 10/28/00
	ILLING							TOTAL DE		LIVE DX1, L. 142430
							and Auger	-		
	MPLIN						and Auger	<del>                                     </del>	WATER: NA	
	MMER							LOGGED B	Y: Matt Eyer IBLE PROFES	SSIONAL: JD
*::,*: /			E DATA			TYPE	SOIL DESCRIP	7 (9) 4		REMARKS
DEPTH (feat)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	USCS	SYMBOL		.1000		VENT WITE
1-2-3-	SB-1-3'		NA NA	0	CL		Clay: Medium dense clar color,(brown, red) trace silt	y, mottled , cobble	Sell containe	ed no unusual objects
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PR	OJECI	Γ; 21	1397 VA	Hospita	<b>A</b>			LOG OF	BOREHOL	.E: SB-2-U8
ВО	RING	LOC:	(N) 4	136490.	19 (E)	4146789	.58			
DR	ILLING	CON	NTRA	СТО	R: vi	ronex		START DAT	TE: 10/26/00	END DATE: 10/25/00
DR	ILLING	MET	THOD	): Ge	oprobe			TOTAL DEF	PTH: 5'	
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mountee	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D: A	crylic Li	ner .		LOGGED B	Y: Matt Eyer	
НА	MMER	WEI	GHT	and F	ALL:	NA	Special Control of the Control of th	RESPONS	IBLE PROFE	SSIONAL: JD
E⇒		MPLE	DATA	1	SOIL	TYPE	SOIL DESCRIPT	TION	F	REMARKS
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PlD (ppm)	nscs	SYMBOL				
1-	1						٠			
2	<u> </u>									
3 –	SB-2-3'	$\Rightarrow$	NA	0	CL		Clay: Dense clay, mottl (brown, gray, red and coarse and fi	ed color, ), cobble ine gravel	Soil contain	ed no unusual objects
4	_							9		
5-		<u> </u>								
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24 –	_									
25 -	1									
26 –	4									

PR	OJECT	Γ; 2	1397 VA	Hospita	회				LOG OF	BOREHOL	E: SB-3-UB
ВО	RING	OC:	(N) 4	136915	50 (E)	4148833	.14				
DR	ILLING	CON	NTRA	CTO	R: v	гопех			START DAT	TE: 10/26/00	END DATE: 10/28/00
DR	ILLING	MET	THOE	); Ge	oprobe				TOTAL DE	 ⊃TH: 5'	
DR	ILLING	EQI	JIPMI	ENT:	Truck	Mounted	d Geoprobe	· · · · · · · · · · · · · · · · · · ·	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	ТНО	D: A	aylic Li	ner			LOGGED B	Y: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA			RESPONS	BLE PROFES	SSIONAL: JD
돈_			DATA	A	SOIL	TYPE		DIL DESCRIPT		1	REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	SOSA	SYMBOL					
1-											
2-											
3—	SB-3-3'	$\Rightarrow$	NA	0	CL		Clay:	Dense clay, mottle (brown, gray, red) and coarse and fil	ed color, ), cobble	Soil contains	ed small amount of brick
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PR	OJECT	Γ: 21	1397 VA	Hospit	al			LOG OF	BOREHOL	E: SB-4-UB		
ВО	RING	OC:	(N) 4	136876	.69 (E)	4148584	.08					
DR	ILLING	CON	NTRA	сто	R: v	ronex		START DAT	TE: 10/26/00	END DATE: 10/25/00		
DR	ILLING	ME	TOP	): Ge	oproba	-	-	TOTAL DEF	PTH: 5'			
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounte	1 Geoprobe	DEPTH TO WATER: NA				
SA	MPLIN	G ME	THO	D: A	crylic Li	ner	LOGGED BY: Matt Eyer					
НА	MMER	WEI	GHT	and F	ALL.	NA	enter de la Granda (Serie de Sente de Serie de S	RESPONSIBLE PROFESSIONAL: JD				
Ξn			DATA	1	SOIL	TYPE	SOIL DESCRIPT	NOF	F	REMARKS		
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL						
1_									}			
2 —												
3-	\$8-4-3'	$\stackrel{\bullet}{>}$	<b>N</b> A	٥	CL		Clay: Dense clay, mottle (brown, gray, red and coarse and fi	ed color, ), cobble	Soli contain	ed no unusual objects		
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PR	OJECT	r <u>:</u> 21	397 VA	Hospita	nł			LOG OF	BOREHOL	E: 58-5-UB
ВО	RING L	OC:	(N) 41	136839,	75 (E)	4146536	.94			
DR	ILLING	CON	ITRA	сто	R: vi	ronax		START DAT	E: 10/26/00	END DATE: 10/26/00
DR	ILLING	MET	THOD	; Ga	oprobe			TOTAL DEF	PTH: 5'	
DR	ILLING	EQL	JIPME	ENT:	Truck	Mounted	1 Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D: Ad	rylic Lir	ner		LOGGED B	Y: Matt Eyer	
НА	MMER	WEI	GHT	and F	ALL:	NA	The second secon	RESPONS	BLE PROFES	SSIONAL: JD
Ξ÷		MPLE	DATA	<u> </u>	SOIL	TYPE	SOIL DESCRIPT	TION		REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL				
1- 2- 3- 4- 5-	SB-5-3'		2	0	CL		Clay: Dense clay, mottle (brown, gray, red and coarse and fi	ed color, ), cobb <del>le</del> ne gravel	Soil contain	ed no unusual objects
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PR	OJECT	r <u>.</u> 21	1397 VA	Hospit	ai				LOG OF	BOREHOL	E: se-6-UB
ВО	RING	OC:	(N) 4	136864	.91 (E)	4146695	.30				
DR	ILLING	CON	NTRA	сто	R: v	ironex			START DAT	TE: 10/26/00	END DATE: 10/26/00
DR	ILLING	MET	THOD	); Ge	oprobe				TOTAL DEF	PTH: 5'	
DR	ILLING	EQL	JIPM	ENT:	Truc	( Mounted	Geoptobe	9	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	THO	D: A	crylic Li	ner		·	LOGGED 8	Y: Malt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA			RESPONS	IBLE PROFE	SSIONAL: JD
エ〜		_	DATA		SOIL	TYPE	S	DIL DESCRIP	MOIT	F	REMARKS
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	nscs	SYMBOL					·
1 — 2 — 3 —	SB-6-3'	*	NA.	0	CL		Clay:	Dense clay, mod (brown, gray, re and coarse and	tted color, d), cobble fine gravel	Soil contain	ed no unusual objects
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5-											<u>-                                      </u>
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PR	OJEC1	Γ: <sup>21</sup>	1397 VA	Hospita	al l			LOG OF	BOREHOL	E: \$8-7-UB	
ВО	RING I	_OC:	(N) 4	136816.	.90 (E)	4148657	.58				
DR	ILLING	CON	NTRA	CTO	R; vi	ronex		START DAT	E: 10/26/00	END DATE: 10/28/00	
DR	ILLING	MET	THOD	); Ge	oprobe			TOTAL DEF	PTH: 5'		
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO WATER: NA			
SAI	MPLIN	G ME	THO	D: A	crylic Li	160		LOGGED BY: Matt Eyer			
HA	MMER	WEI	GHT	and F	ALL:	NA		RESPONS	BLE PROFES	SSIONAL: JD	
Ē≘		MPLE	DATA	<b>\</b>	SOIL	TYPE	ŞOIL DESCRIPT	TION	F	REMARKS	
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	Р/О (врт)	SCS	SYMBOL					
1-											
2-											
3-	SB-7-3'	$\Rightarrow$	NA.	٥	CL		Clay: Dense clay, moth (brown, gmy, red and coarse and fi	ed color, ), cobble ne gravel	Soil containe	ed no unusual objects	
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PI	ROJECT	Γ: 2 <sup>.</sup>	1397 VA	Hospita	al	_		LOG OF	BOREHOL	.E: SB-8-UB			
	ORING I		(N) 4	136769.	.87 (E)	4146620	.48						
DI	RILLING	COI	NTRA	СТО	R: v	іголех		START DA	TE: 10/28/00	END DATE: 10/26/00			
DI	RILLING	ME	THOD	); Ge	oprobe			TOTAL DE	PTH: 5'				
DI	RILLING	EQI	JIPM	ENT:	Truck	Mounted	d Geoprobe	DEPTH TO	DEPTH TO WATER: NA				
S	AMPLIN	G ME	ТНО	D; A	crylic Li	ri <del>ë</del> r		LOGGED	Y; Matt Eyer				
H	AMMER	WEI	GHT	and F	ALL:	NA	nera Aldina na santana	RESPONS	BLE PROFES	SSIONAL: JD			
E		AMPLI	E DATA	Α		TYPE	\$OIL DESC	CRIPTION	F	REMARKS			
DEPTH	SAMPLE	RECOVERY	BLOWS	PID (ppm)	SDSN	SYMBOL							
1-	_		NA.	0	CL		Clay: Dense clay (brown, gr and coars	/, mottled color,	Soil contains	ed no unusua) objects			
4 -							and coars	e and fine grave)		·			
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PR	OJECT	r: 2 <sup>-</sup>	1397 VA	Hospit	al			LOG OF	BOREHOL	.E; sa-9-ua		
ВО	RING	OC:	(N) 4	136814	.43 (E)	4146757	.15	_				
DR	ILLING	COI	NTRA	сто	R: v	ironex		START DAT	ΓΕ: 10/26/00	END DATE: 10/26/00		
DR	ILLING	ME	THOD	); Ge	oprobe			TOTAL DE	PTH: 5'			
DR	ILLING	EQI	JIPMI	ENT:	Truck	Mounte	1 Geoprobe	<b>DEPTH TO</b>	WATER: NA			
SA	MPLIN	G ME	THO	D; A	crylic Li	ner .		LOGGED B	Y; Matt Eyer			
НА	MMER	WE	GHT	and F	ALL:	NA	restance term of services	RESPONSIBLE PROFESSIONAL: JD				
툿œ			E DATA	4	SOIL	TYPE	SOIL DESCRIPT	TION	<u></u>	REMARKS		
DEPTH (feet)	SAMPLE NUMBER	RECOVERY	BLOWS	P(D (ppm)	NSCS	SYMBOL						
1_												
2 —							<b>9</b> . <b>9</b>					
3 —	SB-9-3'	芩	NA	0	CL		Clay: Dense clay, moth (brown, gray, red and coarse and fi	ed colopie But colopie	Soil contains	ed no unusual objects		
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PR	OJEC1	ī: 21	1397 VA	Hospita	 al		<del></del>	LOG OF	BOREHOL	E; \$8-10-UB		
BO	RING	OC:	(N) 4	136766	.90 (E)	4146720	.02					
DRI	ILLING	CON	1TRA	сто	R: v	Ironex		START DAT	E; 10/25/00	END DATE: 10/26/00		
DRI	ILLING	ME	HOD	); Ge	oprobe			TOTAL DEF	PTH: 5'			
DRI	ILLING	EQL	JIPMI	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO WATER: NA				
SAI	MPLIN	G'ME	ТНО	D: A	crylic Li	ner		LOGGED B	Y: Matt Eyer			
HA	MMER	WEI	GHT	and F	ALL:	RESPONS	BLE PROFES	SSIONAL: JD				
E		MPLE	DATA	1	SOIL	TYPE	SOIL DESCRIPT	TIÓN	F	REMARKS		
DEPTH (feet)	SAMPLE NUMBER	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL						
1 _												
2												
3-	SB-10-3	$\Rightarrow$	NA	0	CL		Clay: Dense clay, mottle (brown, gray, red and coarse and fi	ed color, ), cobble ine o <i>r</i> avel	Soil contains	ed small amount of brick		
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PR	OJECT	Γ: 2	1397 VA	\ Hospita	al			LOG OF	BOREHOL	E: SB-11-UB	
ВО	RING	_OC:	(N) 4	136719	.05 (E)	4146682	2.45				
DR	ILLING	COI	NTRA	СТО	R: v	ironex		START DAT	ΓΕ: 10/26/00	END DATE: 10/28/00	
DR	ILLING	ME	THOE	); Ge	oprobe			TOTAL DEI			
DR	ILLING	EQI	JIPM	ENT:	Truck	( Mounte	d Geoprobe	ОЕРТН ТО	WATER: NA		
SA	MPLIN	G ME	THO	D: A	cryllic Li	ne/		LOGGED B	Y; Matt Eyer		
НА	MMER	WEI	GHT	and F	ALL:	NA		RESPONS	IBLE PROFES	SSIONAL: JO	
Ξ÷		$\overline{}$	E DATA	4	SOIL	TYPE	SOIL DESCRIPT	TION	REMARKS		
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	nscs	SYMBOL					
1-											
3-	SB-11-3	$\stackrel{\downarrow}{>}$	NA.	0	CL		Clay: Dense clay, motti (brown, red), trac	ed color, se sand.	Soil containe	ed no unusual objects	
4 –		$\prod$					(brown, red), trac cobble and coarse gravel	e and fine			
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	PR	OJECT	T: 2	1397 VA	Hospita	<b>3</b> 1			LOG OF	BOREHOL	.E: SB-12-UB		
	ВО	RING L	-O <b>C</b> :	(N) 4	136763.	88 (E)	4146819	.19					
	DR	ILLING	CON	NTRA	СТО	R: v	ronex	-	START DAT	E: 10/26/00	END DATE: 10/26/00		
ľ	DR	ILLING	ME	THOD	); Gs	oprobe			TOTAL DEF	PTH: 6'			
	DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounte	i Geoprobe	DEPTH TO WATER: NA				
-	SAI	MPLIN	G ME	ТНО	D: A	crylic Li	161		LOGGED BY: Matt Eyes				
	HAI	MMER	WEI	GHT	and F	ALL:	NΑ	erio de la companio	RESPONS	BLE PROFES	SSIONAL: JD		
ſ	Εø			DATA		SOIL	TYPE	SOIL DESCRIP	TION	- 5	REMARKS		
	DEPTH (feet)	SAMPLE NUMBER	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL	•					
	1										•		
	2 –												
	3 —	SB-12-3	$\stackrel{\bullet}{>}$	NA	0	CŁ		Clay: Dense clay, mottl (brown, red), trac cobble and coars	ce sand.	Soll contain	ed small amount of brick		
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	5 —		<u> </u>								<del> </del>		
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DRIL DRIL DRIL SAM	IPLING	CON MET EQU ME	TRACHODIPME	CTO : Ge ENT: D: Ad	R: Vi oprobe Truck	ronex Mounted	.30 i Geoprobe		START DAT		END DATE: 10/26/00
DRIL DRIL SAM	LING LING PLING	MET EQU ME MEIO	HOD IPME THOI HT &	: Ge ENT: D: Ar	Truck	Mounted	i Geoprobe				END DATE: 10/26/00
DRIL SAM HAM	LING IPLING IMER \	MEIC MEIC	THOI HT &	ENT: D: A	Truck		d Geoprobe		TOTAL DES	7TH: 5′	
SAM	IPLING IMER \	ME MEIC	THOI HT &	D: A	crylic Lir		i Geoprobe				
HAN	IMER V	WEIG MPLE	THE	and F		ner			DEPTH TO	WATER: NA	
Dun Austrinofice	SA	/PLE	DATA	rajangan sa	A11				LOGGED B	Y: Matt Eyer	
DEPTH (faet)		_				NA	See 10 gliber light in	<		BLE PROFES	
(fae)	SAMPLE	OVER			SOIL	TYPE		IL DESCRIP			REMARKS
		REC	BLOWS	РЮ (ррт)	กรตร	SYMBOL					
1-											
2-		<u> </u>		_			Clav: I	Dense cíav. molti	led color.		
	SB-13-3		NA	0	CL			Dense clay, moti (brown, gray, red and coarse and t	i), cobble ine gravel	Soil contain	ed small amount of brick
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р	ROJECT	Γ· 2·	1397 VA	Hospita	<u> </u>			LOG OF	BOREHOL	E: SB-14-UB
_	ORING					4146744	98			
	RILLING							START DAT	TE: 10/26/00	END DATE: 10/26/00
D	RILLING	ME	THOD	); Ge	oprobe			TOTAL DE	PTH: 5'	
D	RILLING	EQU	JIPMI	ENT:	Truck	Mounted	Geoprobe	DEPTH TO	WATER: NA	
S	AMPLIN	G ME	ТНО	D: A	cryfic Lit	ner		LOGGED B		
Н	AMMER	WEI	GHT	and F	ALL:	NA		RESPONS	BLE PROFES	SSIONAL: JD
	SA	AMPLE	DATA	Α.		TYPE	SOIL DESCRIPT	ION	F	REMARKS
DEPTH	SAMPLE NUMBER	RECOVER	BLOWS	РІО (ррт.)	USCS	SYMBOL				
1 2 3 4 5	\$8-14-3		NA.	0	CL		Clay: Dense clay, mottle (brown, gray, red) sand, cobble and and fine gravel	ed color, , trace coarse	Soil contains	ed small amount of brick
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11 12 13 14 15										
16 17 18	_ _ _									*
19 20	_									
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	PR	OJECI	r: 2	1397 VA	Nospit:	리				LOG OF	BOREHOL	E: SB-15-UB
	во	RING	_OC;	(N) 4	136713	.45 (E)	4146881	.34	,			
	DR	ILLING	(CO)	VTRA	СТО	R: v	/ironex			START DAT	TE: 10/28/00	END DATE: 10/26/00
	DR	ILLING	ME	THOE	); Ge	oprobe				TOTAL DE	PTH: 5'	
	DR	ILLING	EQL	JIPM	ENT:	Truck	k Mounte	d Geoprob	e	DEPTH TO	WATER: NA	
	SAI	MPLIN	G ME	THO	D: A	crylic Li	ner			LOGGED 8	Y: Matt Eyer	
	HA	MMER	WEI	GHT	and F	ALL	. NA		RESPONS	IBLE PROFES		
		SA		DAT	4		TYPE	OIL DESCRIPT		<u> 18 September 18 </u>	REMARKS	
	DEPTH (feet)	SAMPLE	RECOVERY	WS	PID (ppm)	S	SYMBOL					
		SAM	REC	BLOWS	90	nscs	N × N					
	1—				ĺ							
	2 —											
	3 —	SB-15-3	$\stackrel{\bullet}{>}$	NA	o	CL		Dense clay, mottle (brown, gray, red and coarse and fi	ed color, ), cobble	Soil contain	ed no unusual objects	
	4 —								and coarse and fi	ne gravel		
	5 —		<u> </u>		<u> </u>							
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	25 —											
	26 —											

PR	DJECT	Γ: 2	1397 VA	Hospit	al			LOG OF	BOREHOL	E: SB-16-UB
ВО	RING	LOC:	(N) 4	136666	.42 (E)	4148844.	57			
DR	ILLING	CO	NTRA	СТО	R: v	īronex	÷	START DA	TE: 10/26/00	END DATE: 10/26/00
DR	LLING	MET	THOE	); Ge	oprobe			TOTAL DE	PTH: 5'	
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounted	Geoprobe	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	THO	D: A	crylic Li	ner		LOGGED E	Y: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA	ngga kang ang ang panggan langgan ganggan ga s	RESPONS	BLE PROFE	SSIONAL; JD
₽₽			DATA	\ \{\bar{\}}	SOIL	TYPE	SOIL DESCRIP	TION	F	REMARKS
DEPTH (feet)	SAMPLE NUMBER	RECOVERY	BLOWS	PID (ppm)	SOSA	SYMBOL				
1_										
2-						land a silva				
3~	SB-15-3	×	NA.	0	CL	led color, i), cobble fine gravel	and had a s	ed small amount of brick trong organic		
4 –								•	decompositi	on smeir
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PR	OJECT	T: 2	1397 VA	\ Hospit			_	LOG OF	BOREHOL	E; SB-17-UB
ВО	RING	OC:	(N) 4	136519	.29 (E)	4146808	3.12		•	
DR	ILLING	COI	NTRA	СТО	R: v	ironex		START DA	TE; 10/28/00	END DATE: 10/28/00
DR	ILLING	ME	THOE	); Ge	oprobe			TOTAL DE	PTH: 5'	
DR	ILLING	EQL	JIPM	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	ТНО	D: A	crylic Li	ņer		LOGGED E	Y; Matt Eyer	<u> </u>
НА	MMER	WEI	GHT	and F	ALL:	NA	e ilike kalamatan Milana Sela ka	RESPONS	IBLE PROFES	SSIONAL: JD
문술			DATA	A =	SOIL	TYPE	SOIL DESCRIPT	ION	F	REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL				_
1-										
3-	SB-17-3	<b>↓</b>	NA.	٥	CL		Clay: Dense clay, mottle	ad color,	Soll contains	ed small amount of brick
4-	35-17-3						(brown, gray, red and coarse and fi	ne gravel		
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PR	OJECT	2	1397 VA	Hospit	 al			LOG OF	BOREHOL	.E; \$8-16-UB
ВО	RING	OC:	(N) 4	136671	.96 (E)	4148645	i.60			
DR	ILLING	COI	NTRA	сто	R: v	lronex	<del></del>	START DAT	TE: 10/26/00	END DATE: 10/26/00
DR	ILLING	ME	ПНОГ	); Ge	oprobe			TOTAL DEF	PTH: 5'	
DR	ILLING	EQL	JIPM	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	ETHO	D: A	crylic Lis	ner		LOGGED B	Y: Matt Eyer	_
НА	MMER	WEI	GHT	and F	ALL:	NA	e Calmana e Calmana de	RESPONS	IBLE PROFES	SSIONAL: JD
돈슾			DATA	4	SOIL	TYPE	SOIL DESCRIPT	TON	F	REMARKS
DEPTH (faet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	nscs	SYMBOL				
1-										
2	_									
3 –	SB-18-3	$\stackrel{\bullet}{>}$	NA	0	CF		Clay: Dense clay, mottle (brown, gray, red) sand cobble and	), trace	Soil contains	ed small amount of brick
4 —	-						and fine gravel	CSU140		
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PR	OJECT	Γ: 2 <sup>·</sup>	1397 VA	Hospita	p)			LOG OF	BOREHOL	E: SB-19-U8
ВО	~									
DR	ILLING	COI	NTRA	СТО	R: v	ironex		START DA	ΓΕ: 10/26/00	END DATE: 10/26/00
DR	ILLING	ME	THOE	); Ge	oprobe			TOTAL DE	PTH: 5'	
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	ТНО	D: A	crylic Li	ner		LOGGED B	Y; Matt Eyer	,
HA	MMER	WEI	GHT	and F	ALL:	NA	RESPONS	IBLE PROFES	SSIONAL: JD	
E≘			DATA	1 2	SOIL	TYPE	SOIL DESCRIPT	ION	F	REMARKS
DEPTH (feet)	SAMPLE NUMBER	RECOVERY	BLOWS	PłD (ppm)	nscs	SYMBOL				
1_										
2 –										
3 -	SB-19-3	$\stackrel{\checkmark}{>}$	NA	٥	CL		Clay: Dense clay, mottle (brown, gray, red and coarse and fi	ed color, ), cobb <del>le</del> na gravet	Sall contains	ed small amount of brick
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	PR	OJEC1	]: 2 <sup>-</sup>	1397 VA	Hospit	al				LOG OF	BOREHOL	E: SB-20-UB
Ì	ВО	RINGL	OC:	(N) 4	136572	09 (E)	4146771	.49				
	DR	ILLING	CON	NTRA	сто	R: v	ironex			START DAT	TE: 10/26/00	END DATE: 10/26/00
	DR	ILLING	ME	THOD	); Ge	оргове		•		TOTAL DEF	PTH: 5'	
	DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounte	d Geoprob	5	DEPTH TO	WATER: NA	
	SAI	MPLIN	G ME	THO	D; A	crytic Li	ner			LOGGED B	Y: Matt Eyer	
	HA	MMER	WEI	GHT	and F	ALL:	NA			RESPONS	BLE PROFES	
	<u>25-10-2-52</u>	SA	<u> katan</u> pagaban	DAT/	\ \	4 3 3 3 3 3	TYPE	S(	OIL DESCRIPT	ION	in \$600, 1 of the region	REMARKS
	DEPTH ((eel)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	USCS	SYMBOL		_			
	1 — 2 — 3 — 4 — 5 —	SB-20-3		NA.	0	CL		Clay:	Dense clay, mottle (brown, gray, red and coarse and fi	ed color, ), cobble ne grave)	Soil contain	ed small amount of brick
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PR	OJEC	7; 2	1397 VA	Hospit	al			LOG OF	BOREHOL	E; \$B-21-LB
ВО	RING I	OC:	(N) 4	136522	.94 (E)	4146293	3.86			
DR	ILLING	COI	NTRA	сто	R: v	ironex		START DAT	TE: 10/26/00	END DATE: 10/26/00
DR	ILLING	ME	THOE	); Ge	oprobe			TOTAL DE	PTH: 5'	
DR	ILLING	EQI	JIPM!	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D; A	crylic Li	ner		LOGGED B	Y: Matt Eyer	
НА	MMER	WEI	GHT	and F	ALL:	NA		IBLE PROFE	SSIONAL: JD	
Εs			DATA	1	SOIL	TYPE	SOIL DESCRIP	TION	ļ ,	REMARKS
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	РІО (ррт.)	SOSA	SYMBOL				
1-										
2 –										•
3 —	SB-21-3	$\stackrel{\bullet}{>}$	NA	٥	CL		Clay: Dense clay, moti (brown, gray, re-	d), cobble	Soil contain	ed no unusual objects
4 —							and coarse and f trace slit	ine gravei,		
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PR	OJECT	[: 2 <sup>·</sup>	1397 VA	Hospit	al			LOG OF	BOREHOL	E: SB-22-LB
ВО	RING I	LOC:	(N) 4	136465	.00 (E)	4146300	.00			
DR	ILLING	COI	NTRA	СТО	R: v	Îronax		START DA	TE: 10/28/00	END DATE: 10/26/00
DR	ILLING	ME	THOE	); Ge	oprobe			TOTAL DE	PTH: 5'	
DR	ILLING	EQI	JIPMI	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	_
SA	MPLIN	G ME	тно	D: A	crylic Li	ner		LOGGED B	SY: Matt Eyer	
НА	MMER	WEI	GHT	and F	ALL:	NA	RESPONS	IBLE PROFES	SSIONAL: JO	
E⇔			DATA	1	SOIL	TYPE	SOIL DESCRIPT	NOI	F	REMARKS
DEPTH (feet)	SAMPLE	SAMPLE NUMBER RECOVERY				SYMBOL				
1-										
2 —				1						
3 ~	SB-22-3	×	NA	٥	CL		ed color, ), cobble 18 gravel,	Soil contains	ed no unusual objects	
4							trace sand	io grava,		
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	PR	OJEC1	Γ: 2 <sup>.</sup>	1397 VA	Hospite	=			LOG OF	BOREHOL	.E: SB-23-LB	
	во	RING	LOC:	(N) 4	136360.	.00 (E)	4146300	.00.				
	DR	ILLING	COI	NTRA	CTO	R; A	El		START DAT	TE: 10/26/00	END DATE: 10/26/00	
ŀ	DR	ILLING	ME	THOD	); На	nd Aug	er		TOTAL DE	PTH; 3°		
ľ	DR	ILLING	EQI	JIPM	ENT:	4° Dia	meter H	and Auger	DEPTH TO	WATER: NA		
	SA	MPLIN	G ME	ТНО	D: 8i	rass Lin	er		LOGGED B	Y: Matt Eyer		
t	НА	MMER	WEI	GHT	and F	ALL:	NA.	annual and the second second second	RESPONSIBLE PROFESSIONAL: JD			
ľ	Εç			DATA			TYPE	SOIL DESCRIP	TION		REMARKS	
	DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	SOSA	SYMBOL					
	1-2-3-	SB-23-3'		NA	٥	CL		Clay: Loose clay, mottle color, (brown, red) trace slit	ed , cobble	Soil containe	od no unusual objects	
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	PR	OJECT	· 21	397 VA	Hospita				LOG OF	BOREHOL	E: SB-24-LB
	ВО	RING L	OC:	(N) 4	136570.	.00 (E)	4146405	5.00			
	DR	ILLING	CON	ITRA	СТО	R: v	ironex		START DAT	E: 10/26/00	END DATE: 10/26/00
	DR	ILLING	MET	THOD	); Ge	oprobe			TOTAL DEF	PTH: 6'	
	DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
	SAI	MPLIN	G ME	THO	D: A	cryilc Li	ner		LOGGED B	Y; Matt Eyer	
ļ	HA	MMER	WEI	GHT	and F	ALL:	NA	e an er og state er skaller	RESPONS	IBLE PROFES	SSIONAL: JD
ĺ	±			DATA		SOIL	TYPE	TION	F	REMARKS	
	DEPTH (feet)	SAMPLE NUMBER	RECOVER	BLOWS	(mdd) Gld	nscs	SYMBOL				
	1-2-3-4-5	SB-24-3	\_\_\_\	NA NA	0	CL		Clay: Dense clay, moti (brown, gray, red and coarse and f	led color, I), cobble ine gravel	Soll contains	ed πο uπusual objects
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	26 —										
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PR	OJECT	[: 21	1397 VA	Haspita	al				LOG OF	BOREHOL	.E: \$8-25-LB
ВО	RING L	OC:	(N) 4	136465.	.00 (E)	4146405	.00				
DR	ILLING	CON	NTRA	сто	R: V	ronex	4		START DA	TE: 10/26/00	END DATE; 10/26/00
DR	ILLING	MET	THOD	); Ge	optobe	_			TOTAL DE	PTH: 5'	
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounted	d Geoprobe		DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D: A	aylic Lir	LOGGED E	BY: Matt Eyer				
НА	MMER	WEI	GHT	and F	ALL:	RESPONS	IBLE PROFE	SSIONAL: JD			
Εs			DATA	4	SOIL	PTION	1	REMARKS			
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	РІБ (ррт)	nscs	SYMBOL	_				
1-											
2-	-			}							
3 –	SB-25-3	$\Rightarrow$	NA	0	CL		atted color, red), cabble of fine gravel, rponent	diass	ed small amount of clear		
4 -	}						small slity con	ponent	from a soda	ared to be new, possibly bottle	
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PR	OJECT	: 21	397 VA	Hospita	nl			LOG OF	BOREHOL	E: 58-26-L8
ВО	RING	OC:	(N) 4	136306.	00 (E)	4148405	.00		· -	
DR	ILLING	CON	ITRA	СТО	₹: vi	ronex		START DAT	E: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	THOD	; Ga	оргобе			TOTAL DEF	PTH: 5'	
DR	ILLING	EQL	JIPME	ENT:	. Truck	Mounter	DEPTH TO	WATER: NA		
SA	MPLIN	G ME	THO	D: A	aylic Lir	101		LOGGED B	Y: Matt Eyer	
НА	MMER	WEI	GHT:	and F	ALL:	NA	ogn M. Laferra, a last the barries.	RESPONS	BLE PROFES	SSIONAL: JD
	SA	MPLE	DATA	1		TYPE	SOIL DESCRIP	ПОМ	F	REMARKS
DEPTH (fest)	SAMPLE	RECOVERY	BLOWS	РІО (ррм)	SOSN	SYMBOL				
1- 2- 3- 4-	SB-26-3		<b>N</b> A	o	CL		Clay: Dense day, mottl (brown, gray, red and coarse and f	ed color, ), cobble ine gravel	Soll containe	ed small amount of brick
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PP	 OJEC1		1397 VA	Hospita	a)			LOG OF	BOREHOL	E: \$8-27-L8	
	RING					4146405	.00				
<b>)</b>	ILLING							START DAT	TE: 10/26/00	END DATE: 10/28/00	
	ILLING							TOTAL DEF			
	ILLING						and Auger				
	MPLIN						•	DEPTH TO WATER: NA LOGGED BY: Matt Eyer			
	MMER							RESPONSIBLE PROFESSIONAL: JD			
	SA	MPLE	DATA	4		TYPE	SOIL DESCRIPT	ПОИ	prijego s nacija, acto s šk	REMARKS	
DEPTH ((eed)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL					
1-	1- NA 0 CL						Clay: Loose clay, moltile color, (brown, red), trace sitt	d cobble	Soil containe	d no unusual objects	
3 -	SB-27-3'	$\stackrel{\checkmark}{\simeq}$									
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BORING LOC: (N) 4136150.00 (E) 4146405.00  DRILLING CONTRACTOR: AEI  DRILLING METHOD: Hand Auger  DRILLING METHOD: Hand Auger  DRILLING METHOD: Brass Uner  HAMMER WEIGHT and FALL: NA  RESPONSIBLE PROFESSIONAL: JO  SAMPLE DATA  SOIL TYPE  SOIL DESCRIPTION  REMARKS  1 - SAMPLE DATA  SOIL TYPE  SOIL Loose day, modiled color, (f) town, red.), cobbie trace sit if the trace sit if th	PRO	OJECT	<b>.</b> 21	 1397 VA	. Haspita	<b>9</b> .1			LOG OF	BOREHOL	.E; sb-28-LB
DRILLING METHOD: Hand Auger  DRILLING EQUIPMENT: 4" Diameter Hand Auger  DEPTH TO WATER: NA  SAMPLING METHOD: Brass Uner  HAMMER WEIGHT and FALL: NA  SAMPLE DATA SOIL TYPE  SOIL DESCRIPTION  REMARKS  SOIL TYPE  SOIL DESCRIPTION  REMARKS  Clay: Loose clay, mobiled color, (prown, red.), cobble stricks sill stricks sil							4146405	6.00			
DRILLING METHOD: Hand Auger DEPTH TO WATER: NA  SAMPLING METHOD: Brass Uner  HAMMER WEIGHT and FALL: NA RESPONSIBLE PROFESSIONAL: JO  SAMPLE DATA SOIL TYPE SOIL DESCRIPTION REMARKS  Clay: Loose clay, motiled color, (brown, red.), cobbie trace all strace all s	DRI	LLING	CON	NTRA	CTO	R: A	 El	-	START DA	ΓΕ: 10/26/00	END DATE: 10/26/00
SAMPLING METHOD: Brass Liner  HAMMER WEIGHT and FALL: NA  RESPONSIBLE PROFESSIONAL: JO  SAMPLE DATA  SOIL TYPE  SOIL DESCRIPTION  REMARKS  1  Clay: Loose clay, mobiled color, (prown, red), cobble brace sit  Sel-28-3  A-  5-  6-  7-  8-  9-  10-  11-  12-  13-  14-  15-  16-  17-  18-  19-  20-  21-  22-  23-	DRI	ILLING	MET	THOE	); Ha	nd Auge	) T		TOTAL DE	PTH: 3'	
HAMMER WEIGHT and FALL: NA   RESPONSIBLE PROFESSIONAL: JO   SAMPLE DATA   SOIL TYPE   SOIL DESCRIPTION   REMARKS	DRI	ILLING	EQI	JIPMI	ENT:	4° Dia	DEPTH TO	WATER: NA			
SAMPLE DATA SOIL TYPE SOIL DESCRIPTION REMARKS  1 -	SAN	MPLIN	G ME	THO	D; B	rass Lin	LOGGED E	Y: Matt Eyer			
SAMPLE DATA   SOIL TYPE   SOIL DESCRIPTION   REMARKS	HAI	MMER	WEI	GHT	and F	ALL:	RESPONS	<u> </u>			
NA   O   CL   Clay: Loose clay, motiled color, (brown, red.), cobble bace sit   Soli contained no unusual object	E	SAMPLE DATA SOIL TYPE SOIL DE							ΓΙΟΝ		
2 - 3 - SB-28-3	DEPT (feet						SYMBOL				
3 - SB-28-3  4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20 - 21 - 22 - 23 - 10 - 10 - 11 - 12 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 10 - 10 - 10 - 10 - 10 - 10 - 10	1 1	1- NA O CL						color.(brown, red).	d cobble	Soll containe	d no unusual objects
5—6—7—8—9—10—11—12—13—14—15—16—17—18—19—20—21—22—23—	3 –	SB-28-3'	$\stackrel{\checkmark}{\geq}$								
6 7- 8- 9- 10- 11- 12- 13- 14- 15- 16- 17- 18- 19- 20- 21- 22- 23-	4-										
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PROJECT: 21397 VA Hospital		LOG OF	BOREHOL	. <b>E:</b> SB-29-LB
BORING LOC: (N) 4136045.00 (E) 4148405.0	00	-		
DRILLING CONTRACTOR: AEI		START DAT	E; 10/26/00	END DATE: 10/26/00
DRILLING METHOD: Hand Auger		TOTAL DEPTH: 3'		
DRILLING EQUIPMENT: 4' Diameter Ha	nd Auger	DEPTH TO	WATER: NA	
SAMPLING METHOD: Brass Liner		LOGGED B	Y: Matt Eyer	
HAMMER WEIGHT and FALL: NA		BLE PROFES	SSIONAL: JD	
SAMPLE DATA SOIL TYPE	SOIL DESCRIPT	TON	Ę	REMARKS
SAMPLE NUMBER SAMPLE NUMBER SECOVERY SECOVERY SYMBOL AT SYMBOL AT SYMBOL AT STATES SYMBOL A				
1- 2- 3- \$B-29-3'	Clay: Loose clay, mottle color,(brown, red), trace silt	d cobble	Soil contains	id no unusual objects
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	OJECT		1397 VA					LOGOF	BUREHUL	E: SB-30-LB
	RING									
DF	RILLING	COI	NTRA	CTO	R: A	E)		START DAT	START DATE: 10/26/00 END DATE: 10/2	
DF	RILLING	ME	THOE	): Ha	nd Auge	er		TOTAL DE	PTH: 3′	
DF	RILLING	EQI	JIPM	ENT:	4° Dia	meter H	and Auger	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D: B	rass Lin	er		LOGGED B	Y: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA	ania, water a samata in the same and a samata a		BLE PROFE	SSIONAL: JD
E	SAMPLE DATA SOIL TYPE						SOIL DESCRIP	_		REMARKS
DEPTH (leel)	SAMPLE	RECOVERY	BLOWS	PtD (ppm)	nscs	SYMBOL				
1-	"	Ť								
2-	]		NA	0	CL		Clay: Loose clay, mottle color, (brown, red). trace silt	od , cobible	Soil contains	ed no unusual objects
3-	SB-30-3'	$\stackrel{\bullet}{>}$	]				vace siit			
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	PR	OJECT	21	397 VA	Hospita	ıl			LOG OF	BOREHOL	E: \$8-31-LB	
		RING L		(N) 4	136675.	00 (E)	4146510	.00				
	DR	ILLING	CON	ITRA	CTO	R: A	 Eł		START DAT	TE: 10/26/00	END DATE: 10/26/00	
r	DR	ILLING	MET	HOD	); Hai	nd Auge	ħ.		TOTAL DE	PTH: 3'		
	DR	ILLING	EQL	HPM!	ENT:	4º Dia	meter Ha	and Auger	DEPTH TO	WATER: NA	٤	
r	SAI	MPLIN	G ME	THO	D: 8r	ass Lin	er		LOGGED BY: Matt Eyer			
92	HAI	MMER	WEI	GHT.	and F	ALL:	RESPONS	BLE PROFES	SSIONAL: JD			
	Εc			DATA	\ 	SOIL	TYPE	SOIL DESCRIP	TION	Ę.	REMARKS	
	DEP1H (feet)	SAMPLE	RECOVER	BLOWS	(mdd) Gid	SOSI	SYMBOL					
	1-2~			NA	0	CL		Clay: Loose clay, mottle color,(brown, red) trace silt	ed , cobble	Soil containe	d no unusust objects	
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PR	OJECT	: 21	1397 VA	Hospita	al			LOG OF	BOREHOL	.E: SB-32-LB	
BC	RINGL	OC:	(N) 4	136570.	00 (E)	4146510	.00.		*		
DF	RILLING	CON	NTRA	CTO	R: v	ironex		START DAT	E: 10/27/00	END DATE: 10/27/00	
DF	RILLING	MET	HOD	); Ge	oprabe			TOTAL DEF	- PTH: 5'	,	
DF	RILLING	EQI	JIPM	ENT:	Truck	Mounted	i Geoprobe	DEPTH TO WATER: NA			
SA	MPLIN	G ME	ТНО	D: A	zylic Liı	nør		LOGGED BY: Matt Eyer			
HA	MMER	WEI	GHT	and F	ALL:	NA	and graduated the contract the state of the	RESPONSIBLE PROFESSIONAL: JD			
ΞΞ			DATA	4		TYPE	SOIL DESCRIPT	TION	F	REMARKS	
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	SSS	SYMBOL					
1~	-										
2 -	-						Class Books along moth				
3 -	SB-32-3	$\Rightarrow$	NA	0	CL		Clay: Dense clay, mottl (brown, gray, red aлd coarse and গি small sity compo	), cobble ne gravel,	Soli contain	ed no unusual objects	
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DRILLING METHOD: Geoprobe TOTA  DRILLING EQUIPMENT: Truck Mounted Geoprobe DEP  SAMPLING METHOD: Acrylic Liner LOGG	OF BOREHOLE: SB-33-LB
DRILLING METHOD: Geoprobe  DRILLING EQUIPMENT: Truck Mountaid Geoprobe  DEPTON SAMPLING METHOD: Acrylic Liner  HAMMER WEIGHT and FALL: NA  RES  SAMPLE DATA SOIL TYPE SOIL DESCRIPTION  SOIL DESCRIPTION  Clay: Dense clay, motified color (brown, gray, red), cobble and coerse and fine graw and coers	
DRILLING EQUIPMENT: Truck Mountaid Geoprobe  SAMPLING METHOD: Acrylic Liner  HAMMER WEIGHT and FALL: NA  RES  SAMPLE DATA  SOIL TYPE  SOIL DESCRIPTION  Clay: Dense clay, mottled color (brown, gray, red), cobble and coarse and fine grave)  1— 2— 3— SB-33-3  NA  O CL  Clay: Dense clay, mottled color (brown, gray, red), cobble and coarse and fine grave)  1— 1— 10— 11— 12— 13— 14— 15— 16— 17— 18— 19— 20— 21— 22— 23— 24— 25—	DATE: 10/27/00 END DATE: 10/27/00
SAMPLING METHOD: Acrylic Liner  HAMMER WEIGHT and FALL: NA  RES  SAMPLE DATA SOIL TYPE SOIL DESCRIPTION  1 - 2 - 3 - SB-33-3 NA  O CL  Clay: Dense clay, motited color (brown, gray, red), cobble and coarse and fine grave and coarse	DEPTH: 5'
HAMMER WEIGHT and FALL: NA  RES  SAMPLE DATA  SOIL TYPE  SOIL DESCRIPTION  A BB-33-3  NA  O CL  Clay: Cense clay, motited color (brown, gray, red), cobbit and coarse and fine grave  1 - 2 - 3 - 8B-33-3  NA  O CL  Clay: Cense clay, motited color (brown, gray, red), cobbit and coarse and fine grave  1 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20 - 21 - 22 - 23 - 24 - 25 - 25 - 25 - 25 - 25 - 25 - 25	TO WATER: NA
SAMPLE DATA SOIL TYPE SOIL DESCRIPTION  THE SAMPLE DATA SOIL DESCRIP	D BY: Matt Eyer
SAMPLE DATA SOIL TYPE SOIL DESCRIPTION  THE STATE OF THE SOIL TYPE SOIL DESCRIPTION  SOIL TYPE SOIL DESCRIPTION  Clay: Dense clay, mottled color (brown, gray, red), cubble and coarse and fine grave and coarse and fine grave state of the st	NSIBLE PROFESSIONAL: JD
1— 2— 3— SB-33-3 NA 0 CL Clay: Dense clay, mottled color (brown, gray, red), cobble and coerse and fine grave  5— 6— 7— 8— 9— 10— 11— 12— 13— 14— 15— 16— 17— 18— 19— 20— 21— 22— 23— 24— 25—	REMARKS
1—2—3—SB-33-3 NA 0 CL Clay: Dense clay, mottled color (brown, gray, red), cobble and coarse and fine grave and coarse and fine grave and fine	
2 — 3 — SB-33-3 NA 0 CL Clay: Dense clay, mottled color (brown, gray, red), cobble and coerse and fine grave and coerse and fine grave are clay in the coerse and fine grave are clay in the color (brown, gray, red), cobble and coerse and fine grave are clay in the coerse are clay in the clay in t	
3 — SB-33-3 NA 0 CL Clay: Dense clay, motted color (brown, gray, red), cobble and coerse and fine grave and coerse and c	
5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-	Cail analyticad as your and able at
5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-	Soil contained no unusual objects
6 7- 8- 9- 10- 11- 12- 13- 14- 15- 16- 17- 18- 19- 20- 21- 22- 23- 24- 25-	
8- 9- 10- 11- 12- 13- 14- 15- 16- 17- 18- 19- 20- 21- 22- 23- 24- 25-	
9 — 10 — 11 — 12 — 13 — 14 — 15 — 16 — 17 — 18 — 19 — 20 — 21 — 22 — 23 — 24 — 25 —	
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11- 12- 13- 14- 15- 16- 17- 18- 19- 20- 21- 22- 23- 24- 25-	
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	Page 33 of 66
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PROJ	ECT:	21	397 VA	Hospk	 al			LOG OF	BOREHOL	.E: SB-34-LB
BORIN	NG LO	DC:	(N) 4	136360	.00 (E)	4146510	.00			
DRILL	ING (	CON	ITRA	СТО	R: v	полех		START DAT	TE: 10/27/00	END DATE: 10/27/00
DRILL	ING I	VET	HOD	; Ge	oprobe			TOTAL DE	PTH: 5'	
DRILL	ING	EQU	IIPM	ENT:	Truck	Mounte	Geoprobe	DEPTH TO	WATER: NA	
SAMP	LING	ME	THO	D: A	crylic Li	1er		LOGGED B	BY: Matt Eyer	
HAMN	IER V	VEK	GHT	and F	ALL:	NA	in aggrega, repeat in over a beginned		IBLE PROFE	SSIONAL: JD
F 🛖 🔠			DATA	\ F	SOIL	TYPE	SOIL DESCRIP	TON	!	REMARKS
(keet)	NUMBER	RECOVERY	BLOWS	PID (ppm)	SOSA	SYMBOL				
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PR	OJECT	2	1397 VA	Hospit	 ał			LOG OF	BOREHOL	E: SB-35-LB	
ВО	RING L	OC:	(N) 4	136255	.00 (E)	4146510	1.00				
DR	ILLING	COI	VTRA	сто	R: v	gonex.		START DAT	E: 10/27/00	END DATE: 10/27/00	
DR	ILLING	ME	THOD	): Ge	oprobe			TOTAL DEF	TH: 5'		
DR	ILLING	EQI	JIPM	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO WATER: NA			
SA	MPLIN	S ME	ТНО	D: A	crylic Li	LOGGED B	Y: Mat Eyer				
HA	MMER	WEI	GHT	and F	ALL		BLE PROFES	SSIONAL: JD			
¥≎			DATA	1 2	SOIL	TYPE	SOIL DESCRIP	TION	, F	REMARKS	
DEPTH (feet)	SAMPLE NUMBER	RECOVERY	BLOWS	PIO (ppm)	sosn	SYMBOL					
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3 —	SB-35-3	$\stackrel{\bullet}{>}$	NA	0	ÇL		Clay: Dense clay, mott (brown, gray, red and coarse and t	led color, i), cobble fine ocavel	Soil containe	ed small amount of	
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	PR	OJEC1	Γ: 2·	1397 VA	Hospita	al			LOG OF	BOREHOL	.E: \$8-36-LB
	ВО	RING	OC:	(N) 4	136150	.00 (E)	4146510	.00			
	DR	ILLING	CO	NTRA	СТО	R; v	îronex		START DAT	ΓΕ; 10/27/00	END DATE: 10/27/00
1	DR	ILLING	ME	THOE	): Ge	abrope			TOTAL DEF	PTH: 5'	
	DR	ILLING	EQI	JIPM	ENT:	Truck	( Mounte	DEPTH TO	WATER: NA		
7	SA	MPLIN	G ME	THO	D; A	crylic Li	ner		LOGGED B	Y: Matt Eyer	
} :: <i>s</i> :	HAI	MMER	WEI	GHT	and F	ALL:	NA /a- ii	: www.w. dela.combes.c	RESPONS	BLE PROFES	SSIONAL: JD
		SA	MPLE	DATA	A		TYPE	SOIL DESCRIP	TION	F	REMARKS
DEP	(feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	USCS	SYMBOL				
1	1 — 2 — 3 —	5B-36-3		N/A	0	CL		Clay: Dense clay, mott (brown, red), cot and coarse and t	led color, oble	Soll containe	ed no unusual objects
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PROJECT: 21397 VA Hospita	al l	LOG OF	BOREHOL	E: SB-37-LB	
BORING LOC: (N) 4136465.	00 (E) 4146615.00		,		
DRILLING CONTRACTOR	R: Vironex	START DAT	START DATE: 10/27/00 END DA		
DRILLING METHOD: Geo	oprobe	TOTAL DEP	TOTAL DEPTH: 5'		
DRILLING EQUIPMENT:	Truck Mounted Geoprobe	DEPTH TO \	DEPTH TO WATER: NA		
SAMPLING METHOD: AC	crylic Liner	LOGGED BY	LOGGED BY: Matt Eyer		
HAMMER WEIGHT and F	ALL: NA		RESPONSIBLE PROFESSIONAL: JD		
	SOIL TYPE SOIL DE	SCRIPTION		REMARKS	
SAMPLE NUMBER SECOVERY TECOVERY TO SECOVERY TO SECOND TO SEC	SYMBOL				
1-					
2 - 3 - SB-37-3 NA 0	Clay: Dense c	lsy, mottled color,	Soil contain	ed no unusval objects	
3 - 583/3	and coa	gray, red), cobble rse and fine gravel,			
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PR	OJECT	7: 21	1397 VA	Hospita	 al			LOG OF	BOREHOL	E: SB-38-LB
ВО	RING L	OC:	(N) 4	136360.	00 (E)	4146615				
DR	ILLING	CON	NTRA	CTO	R: v	ronex		START DAT	TE: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	THOD	); Ge	oprobe			TOTAL DE	PTH; 5'	
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounted	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D: A	crylic Li	ner		LOGGED B	Y; Matt Eyer	
HA	MMER	WE	GHT	and F	ALL:	NA		RESPONS	IBLE PROFES	
I _			DATA		SOIL	TYPE	SOIL DESCRIPT	TION	F	REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	USCS	SYMBOL				
1-2-3-4-	SB-38-3		NA	0	CL	Clay: Dense clay, mottle (brown, gray, red) and coarse and fir trace sand	ed color, ), cobble ne gravel,	Soil contains	ed no unusual objects	
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PR	OJECT	7: 21	1397 VA	Hospita	a1		_ <del>:</del>	LOG OF	BOREHOL	E; SB-39-L8
ВО	RING	OC:	(N) 4	136255.	.00 (E)		•			
DR	ILLING	CON	NTRA	CTO	R: v	ironex	START DAT	ΓΕ: 10/27/00	END DATE: 10/27/00	
DR	ILLING	MET	THOD	); Ge	oprobe		TOTAL DE	PTH: 5"		
DR	ILLING	EQI	JIPMI	ENT:	Truck	Mounte	1 Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D: A	crylic Li	ner		LOGGED 8	Y: Matt Eyer	
НА	MMER	WEI	GHT	and F	ALL:	NA	ezikusta ilika tirakirin repair telebi ilikaria	RESPONS	IBLE PROFES	SSIONAL: JD
	SA	MPLE	DATA	٩		TYPE	SOIL DESCRIP	TION	F	REMARKS
DEPTH (feel)	SAMPLE	RECOVERY	BLOWS	P(D (ppm)	USCS	SYMBOL				
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3 —	SB-39-3	$\Rightarrow$	NΑ	0	CL		Clay: Dense clay, mot (brown, gray, re and coarse and	led color, d), cobble fine gravel	Soil contains	ed no unusual objects
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PR	OJECT	<b>T:</b> 2'	1397 VA	Hospita	ıl			LOG OF	BOREHOL	E: 58-40-LB
ВО	RING	LOC:	(N) 4	136150.	00 (E)	4146615				
DR	ILLING	CON	NTRA	CTO	₹: v	ironex		START DATE: 10/27/00 END DATE: 10/27/		
DR	ILLING	ME	THOD	); Ge	oprobe			TOTAL DE	PTH: 5'	
DR	ILLING	EQL	JIPM	ENT:	Truck	Mounted	Geoprobe	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	THO	D: A	rylic Lir	ner		LOGGED E	Y: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA	San San englished San San San San San		BIBLE PROFES	SSIONAL: JD
	SA	MPLE	DATA	4		TYPE	SOIL DESCRIP			REMARKS
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	nscs	SYMBOL				
1 — 2 — 3 — 4 — 5 —	SB-40-3		NA	0	CL		Clay: Dense clay, mott (brown, gray, rec and coarse and fi trace sit compor	ied color, s), cobble ine gravel, nent	Soli contain unchaned v	ed small amount of rood
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PR	OJECT	21	1397 VA	Hospita	<del>`</del> al			LOG OF	BOREHOL	E: SB-41-LB
ВО	RING L	OC:	(N) 4	138045	.00 (E)	4146615	.00			
DR	ILLING	CON	<b>VTRA</b>	СТО	R: vi	ironex		START DA	ΓΕ: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	THOD	); Ge	oprobe			TOTAL DE	PTH: 5'	
DR	ILLING	EQI	JIPME	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	THO	D: A	crylic Li	ner		LOGGED E	Y; Matt Eyer	
HAI	MMER	WEI	GHT	and F	ALL:	NA		RESPONS	IBLE PROFES	SSIONAL: JD
(	SA	MPLE	DATA	4		TYPE	SOIL DESCRIPT	TION	F	REMARKS
DEPTH (feet)	SAMPLE	RECOVERS	BLOWS	PID (ppm)	NSCS _	SYMBOL				
1 -	1									
2 –										
3 —	SB-41-3	$\stackrel{\bullet}{>}$	N.A	0	CL		Clay: Dense clay, motth (brown, red), cob and coarse and fi	ed colot, bie ne aravel	Soll contains	ed no unusual objects
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PROJECT: 21397 VA Hosp	<u>ttal</u>	LOG OF BOREHOL	E: SB-42-LB
BORING LOC: (N) 413594			
DRILLING CONTRACTO	DR; Vironex	START DATE: 10/27/00	END DATE: 10/27/00
DRILLING METHOD: G		TOTAL DEPTH: 5'	
DRILLING EQUIPMENT	<u> </u>	DEPTH TO WATER: NA	-
SAMPLING METHOD:		LOGGED BY: Matt Eyer	<del>ا                                      </del>
HAMMER WEIGHT and		RESPONSIBLE PROFE	
- SAMPLE DATA	SOIL TYPE SOIL DESCRIP	TION	REMARKS
SAMPLE NUMBER CRECOVERY BLOWS PID (ppm)	USCS		
1 — 2 — 3 — SB-42-3 NA 0	Clay: Dense clay, motti (brown, gray, rec and coame and fi small slity compo	led color, I), corbble ine gravel, onent	ed no unusual objects
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nne			10071/4	L(b)				100.05	BODENO	F
	JECT		1397 VA					LOG OF	BOREHOL	.E: SB-43-LB
<b> </b>	RINGL						7.40			
DRII	LLING	COI	NTRA	CTO	R: v	ironex		START DAT	ΓΕ: 10/26/00	END DATE: 10/26/00
DRII	LLING	MET	THOD	); Ge	oprobe			TOTAL DE	PTH: 5'	
DRII	LLING	EQI	JIPMI	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SAM	1PLIN	G ME	THO	D: A	crylic Li	ner		LOGGED	Y: Matt Eyer	
HAN	MER	WEI	GHT	and F	ALL:	NA	Solden by the least of Solden by the sold by the sold		IBLE PROFES	
Es-			DATA	1	SOIL	TYPE	SOIL DESCRIP			REMARKS
DEPTH (feet)	SAMPLE NUMBER	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL				
1-										
2										
3 —	5B-43-3	$\stackrel{\bullet}{>}$	NA	٥	CL		Clay: Dense clay, moth (brown, gray, red	ed color, ), cobble	Soil contains	ed no unusual objects
4	ļ						and coarse and fi trace sand	ue disver		
5-		_	· ·		<u> </u>	1.7.7.		<del></del>		<del></del>
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PR	OJECT	21	397 VA	Hospit	al			LOG OF	BOREHOL	.E: SB-44-LB
ВО	RING L	OC:	(N) 4	135730	.00 (E)	4146615	5.00			
DR	ILLING	CON	NTRA	сто	R: v	tonex		START DAT	TE: 10/27/00	END DATE: 10/27/0
DR	ILLING	MET	HOD	): G	oprobe			TOTAL DE	PTH; 5'	
DR	ILLING	EQL	JIPMI	ENT:	Truck	c Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D; A	crylic Li	ner		LOGGED B	Y: Matt Eyer	
HA	MMER	WEI	GHT	and [	ALL:	NA NA	and the second distribution of the second second	RESPONS	IBLE PROFES	SSIONAL:_JD
	SA	MPLE	DATA	4	_	TYPE	SOIL DESCRIPT	ION	<u> </u>	REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PIO (ppm)	nscs	SYMBOL				
1-										
2-										
3-	SB-44-3	$\stackrel{\bullet}{>}$	NA	0	CL		Clay: Dense ctay, moth (brown, gray, red and coarse and fi	ed color, , cobble	Soil contain	ed small amount of
4 —							and coarse and fi	ne gravel		
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PR	OJECT	r: 21	397 VA	Hospitz	al			LOG OF	BOREHOL	E: 58-45-L8
ВО	RING	OC:	(N) 4	1 <b>363</b> 60.	.00 (E)	4146720				
DR	ILLING	CON	ITRA	СТОІ	R: V	ronex	•	START DAT	E: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	HOD	; Ge	oblope			TOTAL DEP	TH: 5'	·
DR	ILLING	EQL	JIPM	ENT:	Truck	DEPTH TO	WATER: NA			
SA	MPLIN	G ME	THO	D; A	crylic Lir			LOGGED B	Y: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA		RESPONS	BLE PROFES	SSIONAL: LD
r_		MPLE	DATA	\	SOIL	TYPE	SOIL DESCRIPT	rion	F	REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL				
1-2-3-4-	SB-45-3		NA	O	CL		Clay: Dense clay, mottl (brown, gray, red and coarse and fi	ed color, ), cobble trie gravel	Soli containe	ed no unusual material
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PR	OJECT	r: 2	1397 VA	Hospita				LOG OF	BOREHOL	E: SB-46-LB
ВО	RING	OC:	(N) 4	136255	.00 (E)	4146720				
DR	ILLING	COI	NTRA	CTO	R: v	ironex		START DAT	E: 10/27/00	END DATE: 10/27/00
DR	ILLING	ME	THOD	): Ge	oprobe			TOTAL DEF	TH: 5'	
DR	ILLING	EQI	JIPMI	ENT:	Truck	DEPTH TO	WATER: NA			
SA	MPLIN	G ME	THO	D: A	crylic Li	ner		LOGGED B	Y: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA	The second control of the second seco		BLE PROFES	
	SA	MPLE	DATA	١		TYPE	SOIL DESCRIPT			REMARKS
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	uscs	SYMBOL				
1_										
2 -							<b>-</b> \ -			
3-	SB-46-3	$\stackrel{\bullet}{>}$	NA	0	CL		Clay: Dense clay, mottle (brown, gray, red) and coarse and fir	ed color, ), cobble ne cravel	Soil contain	ed no unusual objects
4-							dark organic vein	a graver,		
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	PRO	OJECT	21	397 VA					_	LOG OF	BOREHOL	.E; sb-47-LB
		RING L					4146720					
	DR	ILLING	CON	ITRA	CTO	R: v	ironex		START DAT	E: 10/27/00	END DATE: 10/27/00	
	DR	ILLING	MET	HOD	Ger	oproba			TOTAL DEP			
	DR	ILLING	EQL	JIPMI	ENT:	Truck	Mountet		DEPTH TO	WATER: NA		
		MPLIN						_		LOGGED B		
	HAI	MMER	WEI	GHŢ	and F	ALL:	NA.			RESPONSI	BLE PROFES	
ĺ	#: · · · ·		MPLE	DAT	****	SOIL	TYPE	SOIL	DESCRIPT	NOF	F	REMARKS
	DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	nscs	SYMBOL					
	1-2-							ase clay, mottle	ed color		and the second s	
	3 — 4 — 5 —	SB-47-3	$X \longrightarrow$	NA	0	CL		(br	own, red), cobi d coarse and ก็	ble l	Soli containi	ed small amount of brick
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PR	OJECT	21	397 VA	Hospita	L)			LOG OF I	BOREHOL	E: SB-48-LB
ВО	RING	OC:	(N) 4	136045.	00 (E)					
DR	ILLING	CON	NTRA	ÇTO	₹: v	ironex	START DATE	E: 10/27/00	END DATE: 10/27/00	
DR	ILLING	MET	HOD	: G <del>o</del>	probe			TOTAL DEP	TH: 5'	
DR	ILLING	EQL	JIPME	ENT:	Truck	Mounted	Geoprobe	DEPTH TO V	WATER: NA	
SA	MPLIN	G ME	THO	D: A	zylic Li	ner		LOGGED BY	/: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	. NA		RESPONSI	BLE PROFES	SSIONAL: JD
	SA	MPLE	DATA	1		TYPE	SOIL DESCRIPT	ION		REMARKS
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	uscs	SYMBOL				
1 2 3	SB-48-3		NA	o	CL		Clay: Dense clay, moth (brown, gray, red and coarse and fi	), cobbie l	Soil contain	ed no unusual objects
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PR	OJECT		1397 VA	Hospit	a)			LOG OF	BOREHOL	E: 58-49-LB
ВО	RING	OC:	(N) 4	135730	.00 (E)	4146720				
DR	ILLING	COI	NTRA	сто	R: A	EJ	<del>-</del>	START DA	TE: 10/27/00	END DATE: 10/27/00
DR	ILLING	ME	THOD	). Ha	nd Aug	9r		TOTAL DE	 РТН: з'	
DR	ILLING	EQI	JIPMI	ENT:	4" Di	imeter H	DEPTH TO	WATER: NA		
SA	MPLIN	G ME	ТНО	D: B	rass Lin	LOGGED E	Y; Matt Eyer			
НА	MMER	WEI	GHT	and F	ALL:	NA.		RESPONS	IBLE PROFES	SSIONAL: JD
Fo			DATA	\	SOIL	TYPE	SOIL DESCRIPT	TION	F	REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	SOSA	SYMBOL				
1-2-			NA	0	C.r.		Clay: Loose clay, mottle color,(brown, red), trace slit	ed , cobble	Soll containe	id no unusual objects
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PR	OJECT	: 21	1397 VA	Hospita	ol .			LOG OF	BOREHOL	.E; 88-50-L8
ВО	RINGL	OC:	(N) 4	136045.	00 (E)	4146825	.00			
DR	ILLING	CON	NTRA	СТО	R: A	EI		START DAT	E: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	THOD	); Hai	nd Auge		-	TOTAL DEF	TH: 3'	
DR	ILLING	EQL	JIPMI	ENT:	4° Dia	meter H	and Auger	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	ТНО	D: B	ass Lin			LOGGED B		_
HA	MMER	WEI	GHT	and F	ALL:	NA		RESPONS	BLE PROFES	SSIONAL: JD
I			DATA		SOIL	TYPE	SOIL DESCRIPT	ION	F	REMARKS
DEPTH (feel)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL				
1 —			NA.	0	CL		Clay: Loose clay, mottled	<b>.</b>	Sall containe	id no unusual objects
2 —							color, (brown, red), trace silt	cobble		
-	SB-50-3'	$\geq \leq$				7///	<u> </u>			
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BO		. 2		Hospit	<b>a</b> )			LOG OF	BOREHOL	E: 58-51-LB
1 20	RING	OC:	(N) 4	135940	.00 (E)	4146825	.00			
DR	ILLING	CON	VTRA	СТО	R; v	ironex		START DA	TE: 10/27/00	END DATE: 10/27/00
DR	ILLING	ME	THOD	); Ge	oprobe			TOTAL DE	PTH; 5'	
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounted	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D; A	crylic Li	n <del>e</del> r		LOGGED		
HA	MMER	WEI	GHT	an <u>d F</u>	ALL:	NA		RESPONS		SSIONAL: JD
EΩ			DATA	\	SOIL	TYPE	SOIL DESCRIP	TION		REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	SOSO	SYMBOL				
1-2-3-4-5-	SB-51-3		NA .	D	CL		Clay: Dense clay, mottl (brown, gray, red and coarse and fi	ed cator, ), cobble ine gravel	Soil contain	ed no unusual objects
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PR	OJECT	2	1397 VA	Hospita	al			LOG OF	BOREHOL	.E: SB-52-LB
ВО	RING L	OC:	(N) 4	135835	00 (E)	4148825	.00		•	
DR	ILLING	COI	NTRA	CTO	R: v	ironex		START DA	TE: 10/27/00	END DATE: 10/27/00
DR	ILLING	ME	THOD	); Ge	oprobe			TOTAL DE	PTH: 5'	
DR	ILLING	EQI	JIPM	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D; A	cryfic Li	ner		LOGGED E	SY: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA			IBLE PROFE	SSIONAL: JD
F		-	DATA	A -	SOIL	TYPE	SOIL DESC	RIPTION	<del> </del>	REMARKS
DEPTH ((eet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	SSSN	SYMBOL		·		
1										
2 —	}									
3~	SB-52-3	$\stackrel{\bullet}{>}$	NA	0	CL		Clay: Dense clay, (brown, red and coarse	mottled color, i); cobble	Soli contain	ed no unusual objects
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DRILLING METHOD: Hand Auger  DRILLING EQUIPMENT: 4' Diameter Hand Auger  DEPTH TO WATER: NA  SAMPLING METHOD: Bress Liner  HAMMER WEIGHT and FALL: NA  RESPONSIBLE PROFESSIONAL: JO  SAMPLE DATA  SOIL TYPE  SOIL DESCRIPTION  REMARKS  1  Clay: Loose clay, mottled coolor, (brown, red.), cobbble trace six  Seb-53-3'  Clay: Loose clay, mottled coolor, (brown, red.), cobbble trace six  Soil contained no unusual objectors of the coolor of the cool of the coolor of the	PR	OJEC1	: 21	397 VA	Hospita	 al			LOG OF	BOREHOL	E: SB-53-LB
DRILLING METHOD: Hand Auger  DRILLING EQUIPMENT: 4' Diameter Hand Auger  DRILLING EQUIPMENT: 4' Diameter Hand Auger  DEPTH TO WATER: NA  SAMPLING METHOD: Brass Liner  HAMMER WEIGHT and FALL: NA  RESPONSIBLE PROFESSIONAL: JO  SAMPLE DATA  SOIL TYPE  SOIL DESCRIPTION  REMARKS  1 - 2 - 3 - S8-53-3'  NA 0 CL  Clay: Loose clay, motified color, forwar, red), cobbble truces all  Trues all  Soil contained no unusual object truces all  1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	ВО	RING L	OC:	(N) 4	135730	.00 (E)	4146825	.00			
DRILLING EQUIPMENT: 4' Diameter Hand Auger  SAMPLING METHOD: Bress Liner  HAMMER WEIGHT and FALL: NA RESPONSIBLE PROFESSIONAL: JO  SAMPLE DATA SOIL TYPE SOIL DESCRIPTION REMARKS  SAMPLE DATA SOIL TYPE SOIL DESCRIPTION REMARKS  1 -	DR	ILLING	CON	TRA	СТО	R: A			START DA	TE: 10/27/00	END DATE: 10/27/00
SAMPLING METHOD: Bress Liner  HAMMER WEIGHT and FALL: NA  RESPONSIBLE PROFESSIONAL: JO  SAMPLE DATA  SOIL TYPE  SOIL DESCRIPTION  REMARKS  TO BE SOIL OF SOIL	DR	ILLING	MET	THOD	); Ha	nd Auge	er		TOTAL DE	PTH: 3'	
HAMMER WEIGHT and FALL: NA  RESPONSIBLE PROFESSIONAL: JD  SAMPLE DATA SOIL TYPE SOIL DESCRIPTION REMARKS  TO DESCRIPTION REMARKS  Clay: Locase clay, metiled color, forown, red.), coloble trace six  Soil contained no unusual object trace six	DR	ILLING	EQI	JIPMI	ENT:	4° Dia	meter Ha	and Auger	DEPTH TO	WATER: NA	
SAMPLE DATA   SOIL TYPE   SOIL DESCRIPTION   REMARKS	SA	MPLIN	G ME	THO	D: B	ress Lin	<b>e</b> r		LOGGED	Y: Matt Eyer	
1	HA	MMER	WEI	GHT	and F	ALL:	NA		RESPONS	IBLE PROFES	SSIONAL: JD
1	Ξæ			DATA	1	SOIL		SOIL DESCRIPT	ION	F	REMARKS
NA   0   CL   Clay: Loose clay, motified color, (brown, red.), cobble trace six   Soil contained no unusual object or race six   Soil contained no unusual object   Soil contained no unusual ob	DEP1	SAMPLE	RECOVER	BLOWS	PłD (ppm	SOSO	SYMBOL				
3 - se-533	1 .			NA	0	CL		color,(brown, red),	d cobble	Soil containe	d ná unusual ob <del>locis</del>
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PR	OJECT	: 21	397 VA	Hospita	11			LOG OF	BOREHOI	E; \$8-54-LB
ВО	RING I	OC:	(N) 4	135726.	70 (E)	4146777.	05			
DR	ILLING	CON	NTRA	СТО	R: A	E)		START DA	TE: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	THOD	); Ha	nd Auge	г		TOTAL DE	PTH: 3'	
DR	ILLING	EQL	JIPM	ENT:	4° Ola	rneter Ha	nd Auger	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	THO	D: Br	ass Lin	er		LOGGED	BY: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA	* 117 July 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		BIBLE PROFE	SSIONAL: JD
E.			DATA		SOIL	TYPE	SOIL DESCRIP			REMARKS
DEPTH (feet)	SAMPLE NUMBER	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL				
1-							Clay: Loose clay, mothe			l labora
2			N.A	0	CL		color,(brown, red)	, cobble	Soil contain	ed no unusual objects
3	SB-54-3	$\stackrel{\bullet}{\boxtimes}$								
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F	PRO	OJECT	Γ <b>:</b> 21	13 <b>9</b> 7 VA	Hospite	al			LOG OF	BOREHOL	.E: SB-55-LB
E	301	RING I	OC:	(N) 4	135749.	81 (E)	4146807	.00			
	ORI	LLING	CON	NTRA	CTO	R: v	ironex		START DAT	ΓΕ: 10/27/00	END DATE: 10/27/00
	DRI	LLING	MET	THOD	); Ge	оргобе			TOTAL DE	PTH: 6'	
	DRI	LLING	EQL	JIPMI	ENT:	Truck	Mounted	d Geoprobe	DEPTH TO	WATER: NA	
5	SAN	MPLIN	G ME	THO	D: A	crylic Lir	ner		LOGGED B	Y: Matt Eyer	,
ŀ	IAI	MMER	WEI	GHŢ	and F	ALL:	NA	e de la color de trouble d'actività de la color de la	RESPONS	IBLE PROFES	SSIONAL: JD
		SA	MPLE	DATA	A		TYPE	SOIL DESCRIP	TION_	F	REMARKS
DEPT	(feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	SOSO	SYMBOL			· 	
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2	2-										
3	3-	SB-55-3	$\stackrel{\bullet}{>}$	NA	D	CL		Clay: Dense clay, mott (brown, gray, rec and coarse and t	led color, d), cobble	Soil containe	ed no unusual objects
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PR	OJEC1	T: 21		Hospita	a			LOG OF	BOREHOL	.E; SB-56-L8
ВО	RING L	OC:	(N) 4	135216.	.86 (E)	4146582	.45		•	
DR	ILLING	CON	NTRA	СТО	R: v	ironex		START DAT	E: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	THOE	); Ge	oprobe			TOTAL DEF	PTH: 5'	
DR	ILLING	EQI	JIPM	ENT:	Truck	k Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	ТНО	D: A	crylic Li	ner		LOGGED B	Y: Matt Eyer	
НА	MMER	WEI	<u>GHT</u>	and F	ALL	NA.		RESPONS	BLE PROFES	SSIONAL: JD
E-g			DATA		SOIL	TYPE	SOIL DESCRIPT	ΓΙΟΝ	F	REMARKS
DEPTH (faet)	SAMPLE	RECOVER	BLOWS	PIO (ppm)	SOSU	SYMBOL				
1										
2										
3 —	SB-56-3	$\Rightarrow$	NΑ	٥	a		Clay: Dense clay, moth (brown, gray, red and coarse and fi	ed color, ), cobble	Soll contains	ed namall amount of brick
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PF	ROJECT	<u></u> Γ: 21	1397 VA	. Hospita	1l			LOG OF	BOREHOL	E; S8-57-L8
	PRING		(N) 4	136370.	72 (E)	4146558	.76			
DF	RILLING	CON	NTRA	CTO	R: v	ironex		START DAT	E: 10/27/00	END DATE: 10/27/00
DF	RILLING	MET	THOD	); Ge	oprobe			TOTAL DEF	PTH: 5'	
DF	RILLING	EQL	JIPMI	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D: A	⇒ylic Li	ner		LOGGED B	Y: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA		RESPONS	BLE PROFES	SIONAL: JD
F			DATA	١	SOIL	TYPE	SOIL DESCRIP	TION		REMARKS
DEPTH	SAMPLE	RECOVER	BLOWS	PID (ppm)	nscs	SYMBOL				
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2-	-		NA NA	0	GL		Clay: Dense clay, mott	led color,	Soil contain	ed small amount of brick
3-	SB-57-3	$\uparrow \uparrow \uparrow$	(6)	ľ			(brown, gray, rec and coarse and fi dark organic veir	i), codd <del>le</del> ine gravel, i	oon commun	
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	OJEC1		397 VA					LOG OF	BUREHUL	E: 88-88-LB
ВО	RINGI	LOC:	(N) 4	136505	.85 (E)	4148430	.07 			
DR	ILLING	CON	NTRA	CTO	R: v	ironex		START DAT	TE: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	HOD	); Ge	oprobe			TOTAL DE	PTH: 5'	
DR	ILLING	EQU	JIPM	ENT:	Trud	k Mounte	Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D: A	crylic Li	ner		LOGGED B	Y: Matt Eyer	
HA	MMER	WE	GHT	and l	ALL	NA.		RESPONS	IBLE PROFE	SSIONAL: JD
Į.		MPLE	DATA		SOIL	TYPE	SOIL DESCRIP	TION	F	REMARKS
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	SOSA	SYMBOL				
1-										
2										
3~	S8-58-3		NA	٥	CL		Clay: Dense clay, mot (brown, gray, re	d), cobble	Soil contain	ed rismall amount of green
4 -	}	П					and coarse and	fine gravel	Glass appearing a soda	ared to be new, possibly bottle
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PR	OJECT	T; 21	397 VA	Hospita	 al			LOG OF	BOREHOL	E: SB-59-LB
ВО	RING L	OC:	(N) 4	136558.	62 (E)	4146346	.42			
DR	ILLING	CON	NTRA	СТО	R: vi	голех	· · · · · · · · · · · · · · · · · · ·	START DATE	E: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	HOD	); Ge	oprobe			TOTAL DEP	TH: 5'	~
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounted	d Geoprobe	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	THO	D: A	cryfic Lir	let.		LOGGED BY	: Matt Eyer	
НА	MMER	WEI	GHT	and F	ALL:	NA		RESPONSI	BLE PROFES	SSIONAL: JD
돈ㅠ		MPLE	DATA	1	SOIL	TYPE	SOIL DESCRIPT	TION	F	REMARKS
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PłD (ppm)	SOSI	SYMBOL				
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3 ~	SB-59-3	$\stackrel{\bullet}{>}$	NA	0	CL		Clay: Dense clay, mottle (brown, gray, red and coarse and fi	ed color, ), cobble	Soil contains	ed no unusual objects
4~							and coalse and h	ing graver		
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PR	OJECT	21	397 VA	Hospita	ıt				LOG OF	BOREHOL	E: SB-60-LB
ВО	RING L	OC:	(N) 4	136423.	39 (E)	4146282	.11				
DR	ILLING	CON	ITRA	CTO	₹: vi	ronex		5	START DA	TE: 10/27/00	END DATE: 10/27/00
DR	ILLING	MET	HOD	: Ge	probe			-	TOTAL DE	PTH: 5'	-
DR	ILLING	EQL	IIPME	ENT:	Truck	Mounte	d Geoprobe	1	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	THO	D; Ac	rylic Lir	)er			LOGGED E	Y; Matt Eyer	
HA	MMER	WE	GHT	and F	ALL:	NA			RESPONS	IBLE PROFE	SSIONAL: JD
Į,			DAT/	1	SOIL	TYPE	SOIL DESCR	RIPTI	ON	l l	REMARKS
DEPTH (feet)	SAMPLE NUMBER	RECOVER	BLOWS	PID (ppm)	SOSA	SYMBOL					
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2-			NA		۵,		Clay: Dense clay, r (brown, gray	mottled	color,	Sail annumin	ed no unusual ob <del>jects</del>
3-	SB-60-3	otin	<b>N</b> A	0	CF		(brown, gray and coarse a	, red). Ind fine	cobble gravel	Soli contain	ed to outrain objects
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	OJECT			Hospitz				LUG OF	BOREHOL	SB-61-AP
	RING L						.34 			
DRI	ILLING	CON	ITRA	CTO	R: v	ronex		START DAT	E: 10/26/00	END DATE: 10/26/00
DRI	ILLING	MET	HÖD	); Ge	oprobe			TOTAL DEF	PTH: 13'	
DRI	ILLING	EQL	JIPMI	ENT:	Truck	Mounte	d Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	3 ME	THO	D: Ac	rylic Lir	ner		LOGGED B	Y: Matt Eyer	
HA	MMER	WEI	GHT	and F	ALL:	NA	Conservation of the conservation of	RESPONS		SSIONAL: JD
Ε₽		MPLE	DATA	1	SOIL	ŢYPE	SOIL DESCRIP	TION		REMARKS
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9			1				Ciay: Medium dense cla color (brown, gray little cobble	y, motiled y, rad),	2 " (5)	
10~			NA	0	CL				2011 COLLEGIUM	ed no unusual objects
12 -	SB-61-11	$\Rightarrow$	100		OL.		Clay: Loose gray and be cobble and coars	rown clay, a and fine	Soil contain	ed no unusual objects
13 —							gravel, very unco	nsondateo		
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PR	OJECT	; 21	397 VA	Hospita	 al			LOG OF	BOREHOL	E: SB-62-AP
ВО	RING	OC:	(N) 4	138670.	25 (E)					
DR	ILLING	CON	ITRA	CTO	R: vi	START DAT	TE: 10/26/00	END DATE: 10/26/00		
DR	ILLING	MET	HOD	; Ge	oprobe		TOTAL DE	PTH: 13'		
DR	ILLING	EQL	IPM	ENT:	Truck	Моиль	DEPTH TO	WATER: NA		
SAI	MPLIN	G ME	THO	D: A	cryfic Lir	ner		LOGGED B	Y: Matt Eyer	
HA	MMER	WEK	GHT	and F	ALL:	NA		RESPONS	BLE PROFES	SSIONAL: JD
<b>#</b> ~		MPLE	DATA	N	SOIL	TYPE	SOIL DESCRIPT	ION	F	REMARKS
DEPTH (fest)	SAMPLE NUMBER	RECOVERY	BLOWS	РІБ (ррт)	nscs	SYMBOL				
12 ~ 13 ~ 14 ~ 15 ~ 16 ~ 17 ~ 18 ~ 20 ~ 21 ~ 22 ~ 24 ~ 24 ~ 24 ~ 24 ~ 24 ~ 24			NA		CL		Ctay: Medium dense clar color (brown, gray little cobble  Clay: Loose gray and brookble and coarse gravel, very uncon	own clay, and fine		ed no unusual objects
25 — 26 —	<u> </u>   									

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	OJECI						LOG OF	BOREHOL	.E: S8-63-AP	
ВО	RING	LOC:	(N) 4	136687.	56 (E)	4146920	.57		·	
DR	ILLING	CON	NTRA	CTO	R: v	ironex		START DAT	TE: 10/26/00	END DATE: 10/26/00
DR	ILLING	MET	CHOD	); Ge	oprobe			TOTAL DE	PTH: 13'	
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounte	DEPTH TO	WATER: NA		
SA	MPLIN	G ME	THO	D; A	aylic Li	ner	-	LOGGED B	Y: Matt Eyer	
НА	MMER	WEI	GHT	and F	ALL.	NA	ener av a e l'annue reacti		IBLE PROFES	
돈≘		MPLE	DATA		SOIL	TYPE	SOIL DESCRIP			REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL				,
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10-							Clay: Medium dense day,	, mottled		
1	SB-63-11	>	NA	0	CL		color (brown, gray.	red),	Soil containe	ed no unusual objects
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PR	OJECT	: 21	1397 VA	Hospita	al			LOG OF	BOREHOL	E: SB-64-AP
ВО	RING L	OC:	(N) 4	136702	65 (E)					
DR	ILLING	CON	NTRA	CTO	R: vi	ronex	START DA	TE: 10/26/00	END DATE: 10/26/00	
DR	ILLING	MET	HOD	; Ga	oprobe		TOTAL DE	PTH: 13'		
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounted	DEPTH TO	WATER: NA		
SAI	MPLIN	G ME	THO	D: A	crylla Lir	LOGGED E				
	MMER							RESPONS	BLE PROFES	SSIONAL: JD
	SA		DAT/	۱		TYPE	SOIL DESCRIP	ΠΟΝ		REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	PID (ppm)	nscs	SYMBOL				
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10~	SB-64-11		NA		CL		Clay: Medium dense clay color (brown, gray, little cobble	, rnottled red),	Soll contains	ed no unusual objects
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PF	ROJECT	: 21	1397 VA	Hospita	 ad			LOG OF	BOREHOL	E: SB-65-AP
ВС	PRING	OC:	(N) 4	136685	.64 (E)	4148951	.11			
DF	RILLING	CON	NTRA	СТО	R: v	lionex		START DA	TE: 10/26/00	END DATE: 10/26/00
DF	RILLING	MET	THOD	); Ge	oprobe			TOTAL DE	PTH: 13'	
DF	RILLING	EQL	JIPMI	ENT:	Truck	Mounte	1 Geoprobe	DEPTH TO	WATER: NA	
SA	MPLIN	G ME	THO	D: A	crylic Li	ner	LOGGED	3Y: Matt Eyer		
HA	MMER	WEI	GHT	and f	ALL:	ΝA		RESPONS	IBLE PROFE	SSIONAL: JD
Ξa			DATA	<u> </u>	SOIL	TYPE	SOIL DES	CRIPTION		REMARKS
DEPTH (feet)	SAMPLE	RECOVER	BLOWS	PID (ppm)	nscs	SYMBOL				
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10-							Clay: Dense day (brown, gr cobble	, motiled color, ay, red), little	Soil contain	ed no unusual objects
11-	SB-85-11	$\stackrel{\downarrow}{\simeq}$	NA	0	CL		•			
12 -	4						Clay: Loose gray cobble and gravel, very	coarse and fine unconsolidated	Soil contain	ed no unusual objects
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PR	OJECT	21	397 VA	Hospita	ı,			LOG OF	BOREHOL	.E: SB-66-AP
ВО	RING	OC:	(N) 4	136669.	29 (E)	4148965	.89			
DR	ILLING	CON	ITRA	CTO	₹; vi	LOUGX		START DAT	E: 10/26/00	END DATE: 10/26/00
DR	ILLING	MET	HOD	); Ge	oprobe			TOTAL DEF	PTH: 13'	
DR	ILLING	EQL	JIPMI	ENT:	Truck	Mounted	I Geoprobe	DEPTH TO	WATER: NA	
SAI	MPLIN	G ME	THO	D; Ad	zylic Lir	ner .		LOGGED B	Y: Matt Eyer	
НА	MMER	WEI	GHT	and F	ALL:	NA_		RESPONS	IBLE PROFES	SSIONAL: JD
E -		MPLE	DATA	1	SOIL	TYPE	SOIL DESCRIPT	TION		REMARKS
DEPTH (feet)	SAMPLE	RECOVERY	BLOWS	(wdd) (Na	sosn	SYMBOL				
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9 —							Clav: Madkym dansa cla	v mattled		
10—	) 						Clay: Medium dense cla color (brown, gra) little cobble	, red),	Soil contain	ed no unusual objects
11~	S8-66-11	$\Rightarrow$	NA	٥	CL		Clay: Loose gray and by cobble and coars	rown clay,	0.11	
12—				•			gravel, very uncor		SON CONTAINS	ed no unusual objects
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# **HEALTH AND SAFETY PLAN**

Prepared for:

Subsurface Investigation at Playing Field Constuction Area VA Hospital 11301 Wilshire Boulevard Los Angeles, California

#### A. INTRODUCTION

This Site Specific Health and Safety Plan is written for the Subsurface Investigation located at 11301 Wilshire Boulevard in Los Angeles, California. All job site personnel will follow CAL OSHA safe operating practices as outlined in 29 CFR 1910 and 1926, as well as established guidelines set forth by AEI or their respective companies.

#### B. WORK DESCRIPTION

Prepared by: Matt Eyer

Site Manager: Matt Eyer

Address: 11301 Wilshire Boulevard

Los Angeles, California

The purpose of this investigation is to confirm the absence or presence of Diesel contaminants and CAM 17 Metals in the subsurface. AEI will advance 60 soil borings to 5 feet below ground surface and 6 soil borings to approximately 15 feet below ground surface. AEI's sampling procedures conform to the requirements of the State Regional Water Quality Control Board and the US EPA. All of the samples collected will be analyzed by a state certified laboratory and the entire project will be performed under the responsible charge of a registered professional civil engineer.

#### C. SITE/WASTE CHARACTERISTICS

Hazard Level: Serious: Low:

Moderate: XXX Unknown:

Waste Type: Solid: XXX

Sludge:

Liquid: XXX Gas: XXX

Hazard Characteristics: Toxic, moving machinery and sharps hazard

There will be a three-foot boundary surrounding the work area. The area within this boundary is considered an exclusion zone and only qualified personnel will be allowed to enter. All personnel arriving or departing the site should log in before entering the exclusion zone. All activities on site must be cleared through the Site Manager.

#### D. HAZARD EVALUATION

Potential chemical hazards include skin and eye contact or inhalation exposure to potentially toxic concentrations of vapors. The potential toxic compounds that may exist at the site are listed below with descriptions of specific health effects of each. The list includes the primary potential toxic constituents that may be found at sites previously handling petroleum hydrocarbons, including home heating diesel fuel.

#### 1. Benzene

- a. Colorless to light yellow, flammable liquid with an aromatic odor.
- b. Toxic hazard by inhalation, adsorption, ingestion and skin and/or eye contact.
- c. Exposure may irritate eyes, nose and respiratory system and may cause acute restlessness, convulsions, nausea, or depression. Benzene is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eight hour period is 1.0 ppm.

#### 2. tert-Butylbenzene

- a. Colorless liquid.
- b. Toxic hazard by inhalation and skin and/or eye contact.
- c. Exposure may irritate eyes, nose and respiratory system and may cause acute restlessness, convulsions, nausea, or depression. Tert-Butybenzene is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eight-hour period is 25.0 ppm.

#### 3. Tetrachloroethylene

- a. Colorless liquid with a mild, chloroform-like odor.
- b. Toxic hazard by inhalation, adsorption, ingestion and skin and/or eye contact.
- c. Exposure may irritate eyes, nose, throat; create nausea, dizziness, flush face and neck; ingestion may cause liver damage; carcinogenic\*
- d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eight-hour period is 25.0 ppm.

#### 4. Trichloroethylene

- a. Colorless liquid with a sweet, chloroform-like odor.
- b. Toxic hazard by inhalation, adsorption, ingestion and skin and/or eye contact.
- c. Exposure may irritate nose and eyes and may cause depression of the Central Nervous System; carcinogenic\*.
- d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eight-hour period is 10.0 ppm.

## 5. 1,2,4-Trimethylbenzene

- a. Colorless, flammable liquid.
- b. Toxic hazard by inhalation, adsorption, ingestion and skin and/or eye contact.
- c. Exposure may cause headache, fatigue and drowsiness. May irritate the nose, throat, and skin and may cause anemia.

d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eight-hour period is 1.0 ppm.

### 6. 1,3,5-Trimethylbenzene

- a. Colorless, flammable liquid.
- b. Toxic hazard by inhalation, adsorption, ingestion and skin and/or eye contact.
- c. Exposure may cause headache, fatigue and drowsiness. May irritate the nose, throat, and skin and may cause anemia.
- d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eight-hour period is 1.0 ppm.

#### 7. Antimony

- a. A silvery-white solid.
- b. Toxic hazard by inhalation and skin and/or eye contact.
- c. Exposure may cause irritation of the nose, throat, and mouth. May cause dizziness, nausea, diarrhea, cramps, and insomnia.
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over a tenhour period is 0.5 mg/m<sup>3</sup>.

### 8. Arsenic

- a. Appearance and odor vary.
- b. Toxic hazard by inhalation, adsorption, ingestion and skin and/or eye contact.
- c. Exposure may cause ulceration of nasal septum, dermatitis, gastrointestinal disturbances, respiratory irritation, hyper-pigmentation of skin. Arsenic is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eighthour period is 10 mg/m3.

#### 9. Barium

- Appearance and odor vary depending upon specific compound.
- b. Toxic hazard by inhalation, ingestion, and skin and/or eye contact.
- c. Exposure may cause upper respiratory irritation, muscle spasms, slow pulse, irritation or eyes, and skin burns.
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eight-hour period is 0.5 mg/m3.

#### 10. Beryllium

- Appearance and odor vary.
- b. Toxic hazard by inhalation.
- c. Exposure may cause respiratory symptoms, fatigue, and weight loss. Beryllium is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eighthour period is 2.0 mg/m3.

### 11. Cadmium

- Properties vary depending upon specific compound.
- b. Toxic hazard by inhalation and ingestion.
- c. Exposure may cause dyspnea, coughing, substernal pain, headache, shills, muscle aches, nausea, diarrhea, anosmia, emphysema, and anemia. Cadmium is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eighthour period is 0.2 mg/m3.

#### 12. Chromium

- a. Properties vary depending upon specific compound.
- b. Toxic hazard by inhalation and ingestion.
- c. Exposure may cause histologic fibrosis of lungs. Chromium is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eighthour period is 1 mg/m3.

#### 13. Lead

- a. A heavy ductile soft gray metal.
- b. Toxic hazard by inhalation, ingestion, and skin and/or eye contact.
- c. Exposure may cause weakness, nausea, lassitude, diarrhea, insomnia, anorexia, inflamed mucous membranes and abdominal pains. Lead is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eight-hour period is .05 ppb (in vapor).

#### 14. Mercury

- a. Silvery, mobile odorless liquid.
- b. Toxic hazard by inhalation, absorption, and skin and/or eye contact.
- c. Exposure may cause coughing, dyspnea, bronchial pneumonia, insomnia, headache, fatigue, and irritation of the eyes and skin.
- d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eight-hour period is 0.05 mg/m3.

#### 15. Molybdenum

- a. Appearance and odor vary depending upon specific compound.
- b. Toxic hazard by inhalation, ingestion, and skin and/or eye contact.
- c. Exposure to animals may cause loss of appetite, incoordination, irritation of eyes, nose and throat, dyspnea, and anemia.
- d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eighthour period is 10 mg/m3.

#### 16. Nickel

- a. Appearance and odor vary depending upon specific compound.
- b. Toxic bazard by inhalation, ingestion, and skin and/or eye contact.
- c. Exposure may cause asthma, and pneumonitis. Nickel is carcinogenic.\*
- d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eighthour period is 1 mg/m3.

#### 17. Selenium

- a. Appearance and odor vary depending upon specific compound.
- b. Toxic hazard by inhalation, absorption, ingestion, and skin and/or eye contact.
- c. Exposure may cause irritation of the eyes, nose and throat, headache, chills, fever, dyspnea, and bronchitis.
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eighthour period is 0.2 mg/m3.

#### 18. Silver

- a. Appearance and odor vary depending upon specific compound.
- b. Toxic hazard by inhalation, ingestion, and skin and/or eye contact.
- c. Exposure may cause blue-gray eyes, irritation of nasal septum, throat and skin, and ulceration.
- d. Permissible exposure level (PEL) for a time-weighted average (TWA) over an eight-hour period is 0.01 mg/m3.

#### 19. Thallium

- a. Appearance and odor vary depending upon specific compound.
- b. Toxic hazard by inhalation, absorption, ingestion, and skin and/or eye contact.
- c. Exposure may cause nausea, diarrhea, and abdominal pain.
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eighthour period is 0.1 mg/m3.

#### 20. Vanadium

- a. Yellow-orange powder or dark gray flakes, odorless.
- b. Toxic hazard by inhalation, ingestion, and skin and/or eye contact.
- c. Exposure may cause dermatitis.
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eighthour period is 0.1 mg/m3.

#### 21. Zinc

- a. White fume.
- b. Toxic hazard by inhalation.
- c. Exposure may cause dry throat, coughing, chills, fever, tight chest, dyspnea, back pain, nausea, vomiting, and fatigue.
- d. Permissible exposure level (PEL) for a time weighted average (TWA) over an eight-hour period is 1 mg/m3.

#### \* Known to the State of California to cause cancer.

Additional hazards include heavy construction machinery in operation on-site and a sharps hazard associated with medical waste.

Matt Eyer has been designated to coordinate access control and security on site. All work will strictly follow OSHA guidelines. A safe perimeter has been established at a three feet radius surrounding the site. These boundaries are identified by yellow caution tape and orange safety cones.

A FIRST AID KIT AND A 40 POUND BC FIRE EXTINGUISHER WILL BE AVAILABLE ON SITE.

EMERGENCY SERVICES ARE AVAILABLE BY DIALING 911 ON THE TELEPHONE LOCATED IN THE SITE MANAGER'S VEHICLE. THIS VEHICLE WILL BE ON SITE AT ALL TIMES.

#### E. PERSONAL PROTECTIVE CLOTHING

Based on evaluation of potential hazards, level "D" protective clothing has been designated as the appropriate protection for this project. The level of protective clothing will be upgraded if the organic vapor levels in the operator's breathing zone exceed 5 ppm above background levels continuously for more than five minutes, or if any single reading exceeds 25 ppm. If this occurs then level C protection will be used. If the organic concentration in the operator's breathing zone exceeds 200 ppm for 5 minutes and/or the organic vapor concentration two feet above the excavation exceeds 1,000 ppm or 10% of the lower explosive limit, then the equipment will be shut down and the site evacuated. If organic vapor concentrations exceed 200 ppm and work continues then level B protection will be required.

"EPA Standard Operating Safety Guidelines" defines the levels of protective clothing as follows:

#### LEVEL A:

Fully encapsulating suit / SCBA / Hard hat / Steel toe boots / Safety gloves.

#### LEVEL R

Splash resistant suit / SCBA / Hard Hat / Steel toe boots / Safety gloves.

#### LEVEL C:

Half face respirator / Hard hat / Safety glasses / Steel toe boots / Coveralls / Gloves.

#### LEVEL D:

Coveralls / Hardhat / Safety Glasses / Steel toe boots / Gloves.

If air purifying respirators are authorized, organic vapor w-filter is the appropriate canister for use with the involved substances and concentrations. A competent individual has determined that all criteria for using this type of respiratory protection have been met.

NO CHANGES TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE COMPANY SAFETY OFFICER, J.P. DERHAKE.

#### F. MONITORING INSTRUMENTS

A photo ionization detector and continuous VOC sampling will be used to monitor contaminant concentration.

# G. EMERGENCY HOSPITAL

The closest bospital with an emergency room is:

Veterans Affairs Medical Hospital 11301 Wilshire Boulevard Los Angeles, California 90073

,.....

Emergency

911

Total Distance: 0.5 miles

**Total Estimated Time: 3 minutes** 

## H. READ AND SIGN

The work party was briefed on the contents of this plan on  $\frac{10/24 - 10/22}{100}$  at 8:00 am. All site personnel have read the above plan and are familiar with its provisions.

NAME:	SIGNATURE:	COMPANY NAME:
Darrell Lewis	Dill C:	VIVOLLEX
MICHAEL LEWIN	May	Vianex
Max Eyer	Mha . was	Ačā
Taul Kersa	Pek	AEI
Joe Pehke		AET
PAUL HINKSON	MA	ÆT



#### Environmental Laboratories

7801 Telegraph Road, Suita L 1/1ntebetto, CA 90640 Phone Fax

11-03-2000

Mr. Matt Eyer AEI Consultants 2309 Pacific Coast Hwy., Suite 206 Hermosa Beach, CA 90254

Project:

21397

Project Site: Sample Date: VA Hospital 10-26-2000

Lab Job No.;

AI010114

Dear Mr. Eyer:

Enclosed please find the analytical report for the sample(s) received by STS Environmental Laboratories on 10-30-2000 and analyzed by the following EPA methods:

EPA 8015M (Diesel)
EPA 7000 Series for Cam-17 Metals

All analyses have met the QA/QC criteria of this laboratory.

The sample(s) arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

STS Environmental Laboratory is certified by the CA DHS (Certificate Number 1986). Thank you for giving us the opportunity to serve you. Please feel free to call me at the if our laboratory can be of further service to you.

Sincerely,

Roger Wang, Ph. D. Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.



Environmental Laboratories

7301 Telegraph Road, Suite L Liantebello, CA 90640

Ръопе ( Fax ■

11-03-2000

Client:

AEI Consultants

Lab Job No.:

A1010114

Project:

21397

Date Sampled:

10-26-2000

Project Site:

VA Hospital

Date Received:

10-30-2000

Matrix:

Soil

Date Digested:

10-30-2000

Digestion Method: EPA 3050B Batch No.:

1031-M1

Date Analyzed:

10-31-2000

# Cam-17 Metals (TTLC) Reporting Units: mg/kg (ppm)

Element	EPA	Method	AI10114- 31	AI10114- 32	A110114- 33	AI10114- 34	A110114- 35	AI10114- 36	Reporting
Diettent	Method	Blank	SB61	SB62	SB63	SB64	SB65	SB66	Limit
Antimony (Sb)	7040	ND	14.4	16.9	15.1	12.7	11	13.8	10
Arsenic (As)	7060	ND	1.71	4.18	2.16	1.41	0.96	1.51	0.5
Barium (Ba)	7080	ND	126	139	176	57.5	69.4	67.7	10
Beryllium (Be)	7090	ND	ND	ND	ND	ND	ND	ND	2.5
Cadmium (Cd)	7130	ND	ND	מא	ND .	ND	ND	ND	2.5
Chromium (Cr)	7190	ND	37.4	31.3	31.8	27.8	29.8	37.2	2,5
Cobalt (Co)	7200	ND	4.5	6.8	8.6	5.8	3.2	9.0	2.5
Copper (Cu)	7210	ND	18.2	27.8	21.7	13.9	11	17.3	2.5
Lead (Pb)	7420	ИD	5.7	8.09	7.2	4.4	2.6	9.2	2.5
Mercury (Hg)	7471	ND	ДИ	0.065	ND	ND	0.065	0.065	0.03
Molybdenum (Mo)	7480	ND	סא	סא	ND	ND	ND	ND	5
Nickel (Ni)	7520	ДN	14.5	16	19.8	12.0	8.4	21,4	2.5
Selenium (Se)	7740	ND	ND	ND	ND	ND	ND	ND	0.5
Silver (Ag)	7760	ND	ND	DИ	ND	ND	ND	ND	2.5
Thallium (TI)	7840	ND	7.93	12.2	11.3	5.8	ND	15.4	2.5
Vanadium (V)	7910	ИD	50.6	44.6	53.2	35.9	36	32.3	10
Zinc (Zn)	7950	מא	41.5	98.3	37.2	38.1	22.6	33.2	1.0

Not Detected (at the specified limit). ND:



# Environmental Laboratories

7801 Te agraph Road, Suite L Montec eto. CA 90640

11-03-2000

Client:

**AEI** Consultants

Project:

21397

Project Site:

VA Hospital

Matrix:

Water

Digestion Method: EPA 3010 Batch No .:

1101-M1

Lab Job No.:

A1010114

Date Sampled:

10-26-2000

Date Received:

10-30-2000

Date Digested:

10-30-2000

Date Analyzed: 11-01-2000

## Cam-17 Metals (TTLC) Reporting Units: mg/L (ppm)

				В ста. т. В 2 (ррт.)		
Element	EPA Method	Method Blank	AJ1014- 37			Reporting Limit
	MICHIOG	אוושום	Rinsate			Littii
Antimony (Sb)	7040	ND	סא			0.5
Arsenic (As)	7060	, ND	ND			0.01
Barium (Ba)	7080	ND	ND			0.5
Beryllium (Be)	7090	ND	ND			0.05
Cadmium (Cd)	7130	ND	ND			0.05
Chromium (Cr)	7190	ND	ND			0.1
Cobalt (Co)	7200	ND	ND			0.1
Copper (Cu)	7210	ND	ND			0.05
Lead (Pb)	7420	ND	ND			0.1
Mercury (Hg)	7471	ND	ND			0.001
Molybdenum (Mo)	7480	ND	מא		'	0.4
Nickel (Ni)	7520	DM	ND			0.1
Selenium (Se)	7740	ND	ND			0.01
Silver (Ag)	7760	ND	.ND			0.05
Thallium (TI)	7840	ND	ND	· · · ·		0.2
Vanadium (V)	7910	ND	ND			0.5
Zinc (Zn)	7950	ND	מא			0.05

Not Detected (at the specified limit). ND:



# Environmental Laboratories

301 Telegraph Road, Suite L 1. onlebello, CA 90540 Phone

11-03-2000

Client:

**AEI** Consultants

Project:

21397

Project Site:

VA Hospital

Matrix:

Soil

Batch No:

EJ30-DS1

Lab Job No.:

A1010114

Date Sampled:

10-26-2000

Date Received:

10-30-2000

Date Analyzed:

10-30-2000

# EPA 8015M (Diesel)

Reporting Units: mg/kg (ppm)

Sample ID	Lab ID	DF	Diesel (C10-C23)	Reporting Limit
Method Blank		1 .	ND	10
SB1-3' & SB3-3'	AI10114-1	1	ND	10
SB4-3' & SB5-3'	AI:10114-2	1	D	10
SB6-3' & SB7-3'	AI10114-3	1	ND	10
SB8-3' & SB9-3'	Al10114-4	1	ND	10
SB10-3' & SB11-3'	AI10114-5	1	ND	10
SB12 & SB13	Al10114-6	1	ND	10
SB14 & SB15	Al10114-7	1	ND	10
SB16 & SB17	AI10114-8	1	ND	10
SB18 & SB19	AI10114-9	1	ND	10
SB20 & SB2	AI10114-10	1	ND	10
SB21-3' & SB25-3'	A110114-11	1	20.5	10
SB22-3' & SB23-3'	AI10114-12	1	ND	_ , 10
SB24-3' & SB31-3'	AI10114-13	1	ND	10
SB27-3' & SB28-3'	AI10114-14	1	ND	10
SB29-3' & SB30-3'	AI10114-15	1	10.6	10 '
SB26-3' & SB32-3'	AI10114-16	1	ND	10
SB33-3' & SB34-3'	A110114-17	1	ND	10
SB35-3' & SB36-3'	A110114-18	}	Й	10

ND: Not Detected (at the specified limit).



# Environmental Laboratories

7801 Telegraph Road, Suite L Montebello, CA 90640 Phone

11-03-2000

Client:

**AEI Consultants** 

Project:

21397

Project Site: Matrix: VA Hospital Soil & water

Batch No:

EJ31-DS1

Lab Job No.:

A1010114

Date Sampled:

10-26-2000

Date Received:

10-30-2000

Date Analyzed:

10-31-2000

## EPA 8015M (Diesel) Reporting Units: mg/kg (ppm)

Sample ID	Lab ID	DF	Diesel	Reporting Limit
Method Blank		1	ND	10
SB37-3' & SB38-3'	AI10114-19	1	ND	10
SB39-3' & SB40-3'	A110114-20	1	ND	10
SB41-3' & SB42-3'	AI10114-21	1	DN	10
SB43-3' & SB50-3'	AI10114-22	1	ND	10
SB44-3' & SB51-3'	AI10114-23	t	16.2	10
SB45-3' & SB52-3'	AI10114-24	1	ND	10
SB46-3' & SB47-3'	AI10114-25	1	ND	10
SB48 & SB49	A110114-26	1	ND	10
SB53 & SB54	A110114-27	1	DN	10
\$B55 & \$B56	A110114-28	l l	ND	10
SB57 & SB58	AI10114-29	1	D	10
SB59 & SB60	AI10114-30	1	ND	10
SB61	AI10114-31	1	DND	10
SB62	AI10114-32	1	ND	10
SB63	AI10114-33	. 1	ND	10
SB64	AI10114-34	1	ND	10
SB65	AI10114-35	I	ND	10
SB66	AI10114-36	1	ND	10
Rinsate (water)	AI10114-37		ND	0.5 mg/L

ND: Not Detected (at the specified limit).



**Environmental Laboratories** 

7801 Telegraph Road, Suite L Montebello, CA 90640



11-03-2000

# EPA 8015M (TPH) Batch QA/QC Report

Client:

AEI Consultants

21397

Project: Matrix:

Soil

Batch No.:

EJ30-DS1

Lab Job No.:

AI010114

Lab Sample ID:

A110114-14

Date Analyzed:

10-30-2000

## I. MS/MSD Report Unit: ppm

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept, Limit
ТРН	ND	200	231	235	115.5	117.5	1.7	30	70-130

# II. LCS Result Unit: ppw

Compound	LCS Report Value	True Value	Rec.%	%Rec Accept. Limit
ТРН	224	200	112.0	80-120

Not Detected (at the specified limit). ND:



**Environmental Laboratories** 

7801 Telegraph Road, Suite L Montebello, CA 90640

Phone Fax (c

11-03-2000

# EPA 8015M (TPH) Batch QA/QC Report

Client:

AEI Consultants

21397

Project: Matrix:

Soil

Batch No.:

EJ31-DS1

Lab Job No.:

AI010114

Lab Sample ID:

Q10123-1

Date Analyzed:

10-31-2000

# I. MS/MSD Report Unit: ppm

Analyte	Sample Conc.	Spike Conc.	MS	MSD	MS %Rec.	MSD %Rec.	% RPD	%RPD Accept. Limit	%Rec Accept. Limit
ТРН	ND	200	224	232	112.0	116.0	3.5	30	70-130

## II. LCS Result Unit: ppm

Compound	LCS Report Value	True Value	Rec.%	%Rec Accept Limit
TPH .	225	200	112.5	80-120

ND: Not Detected (at the specified limit).

S hland Technical Services Environmental Labo ries, Inc.

CHAIN OF CUSTODY RECORD

Lab Job Number \$\10/cml

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Tet: Fax:

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hezardous samples will be returned to client or disposed of at client's exponse. \*\* Distribution: WHITE with report, PINK to courier.

Southland Tech. Services, Inc.
7 7801 Telegraph Road, Suite L & K
Montabello, CA 90640

S nland Technical Services Environmental Labo bries, Inc.

CHAIN OF CUSTODY RECORD

Page 2 0

Lab Job Number ALCIONY

#### Turn Around Time Requested Sample Receipt Conditions Remarks P=Plastic Bottle **CKNorma** B=Brass Tube V=VOA Boffle That CRush 8 12 24 Hours Samples are discarded 30 days after results are reported unless other arrangements are 21 2 O Sample Seals Sample ID ĺ } Sample Container Types: 02-3 days 1/210114 Lab Chilled G#Glass Container ST=Steel Tube A=Alr Bag Analyses Requested T'BIP Presned 3 `× BOIZM(DIGRET) 8015M(Gasoline) (XZZE) 0208/209 Anx X Con No., type & container size of Pinnil Received By Note Sampled By Preserve Sample 7 ( 2 9.0.3 Ł Matrix Type 7.1.5 5. X . Sec. 1157 312 1.45 1: 4:5" الم . الم الم Var Proce Sample Collection 3.5 ひとう 5 13:55 3 Time <u>.</u>. -Sime 15.54. 3 1335 Phone # 🎨 Fax # 😤 🖯 12/26/23 Project Site . + .... Date 174.6. Company Southland Tech, Services, Inc. Sample ID 1 Brokenste A St. Oaks J. K. C. C. B. Project No Mame Client 7. St. Report Attention I rates 15 さればい 1.1. ;; ;; 4 . 16. Relinquished By Client Name Resinquished By ,.. ,ī. /. 21393 \$ (\$) , ( , ! Address 1.7.

7801 Telagraph Rood, Suite L & K

Monteballo, CA 90640

Tel: Føx:

made. Hazardous samples will be returned to client or disposed of at client's expense.

Distribution: WHITE with report, PINK to courier.

s hland Technical Services Environmental Labo bries, Inc.

CHAIN OF CUSTODY RECORD

Lab Job Number Al Dionit

Page 3

Client Name   Client Name   Asirt >   Asirt >	i.						Analy	/ses Re	Analyses Requested	Turn Around	Turn Around Time Requested
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Southland Tech. Services, Inc.
7801 Telegraph Rood, Suite L & K
Montebello, CA 90640

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thland Technical Services Environmental Labd bries, Inc.

CHAIN OF CUSTODY RECORD

Page 4

Lab Job Number 120/0114

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Montebello, CA 90640

### hland Technical Services Environmental Labo pries, inc.

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Inland Technical Services Environmental Labories, Inc.

CHAIN OF CUSTODY RECORD

Lab Job Number Alvion4

Page 6

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Montebello, CA 90640

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CHAIN OF CUSTODY RECORD

Lab Job Number Alonon4

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Date   Time   Type   Preserve   Container   G   G   G   G     12.15	Client	Sample	Collection	Matrix	Sample		58/BC			· Ψ		Lab	
12:35	Sample ID	Date	Тіте	Турв	Preserve	container	09	_		- - -		Sample ID	Remarks
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12:15  12:25  12	536:	_	12:12	1	,	, ,			¥	×		-3:	7
12:3,	5263	_	12:15						×	×	_	- 5	•
12:45  1-1-2-1  1-1-2	5.464		12:27							×		15-	*
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Ar Tel:    1, 1, 2, 1, 1, 1, 1, 2, 1, 1, 2, 1, 2, 1, 3, 1, 3, 1, 4, 1, 3, 1, 4, 4, 1, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	5266	7	(r.	-1	_\			-	×	入		12-	
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Note:		Company			Thme	Received By ()	2	pany		Gar.	Slass Cr Sleef Tu	iner	P=Plastic Bottle V=VOA Bottle
& K Tel:	Southland Tech. Services	. Inc.			S S		discorde	d 30 day	vs alter r	esults ever rep	orted un	ess other arrange	ements are
	7801 Telegraph Rood, Su	¥					dous sen	ioles wi	if be retu	mad to client	or dispos	ted of at client's	extiense.



# HISTORICAL METALS AND TOTAL PETROLEUM HYDROCARBONS AS DIESEL CONCENTRATIONS IN DISCRETE SOIL SAMPLES COLLECTED BY OTHERS VETERANS ADMINISTRATION GREATER LOS ANGELES HEALTHCARE SYSTEM LOS ANGELES, CALIFORNIA

				Total	Unknown						Total	Unknown
				Hydrocarbons	Hydrocarbon			Mathyl ten-			Hydrocarbons	Hydrocarbon
Date Sampled	Sample (D No.	Copper (mg/kg)	Lead (mg/kg)	as Gassoline (mg/kg)	Gasoline Range (mg/kg)	Benzene (mø/kg)	Ethylbenzene (mg/kg)	butyl ether (mg/kg)	Tolucne (mg/kg)	Total Xylenes (res/kg)	es Diesel (mg/kg)	Diesel Range (me/kg)
56-Aug-99	HELL-1A	31.6	10.3	~	⊽	\$	\$	\$	\$	<15	01>	Q1>
26-Aug-99	HELI-1B	31.0	12.4	▽	I⊽i	<\$	<\$	\$	<5	<15	<10	<10
26-Aug-99	HELI-2A	31.0	6.2	V		\$	\$>	\$>	\$	<15	<10	<10
26-Aug-99	HEL1-2B	30.4	7.0 ·	⊽	V	\$	\$	\$	\$	<15	<10	<10
26-Aug-99	HELI-3A	29.2	13.7	I>	V	\$	\$	\$	\$	<15	<10	<b>01&gt;</b>
26-Aug-99	HELI-3B	29.0	15.5	V	⊽	Ş	<\$	\$	\$	<15	<10	<10
26-Aug-99	HELY-4A	30.6	14.5	Þ	· ·	\$	\$>	\$	\$	<15	<10	91
26-Aug-99	HELI-4B	31.2	6.6	⊽	V	\$	<\$	۵	\$	<15	<10	15
26-Aug-99	HELI-SA	31.9	8.7	Į	⊽	8	\$	8	\$	<15	<10 <10	17
26-Aug-99	HELI-SB	28.5	8.7	Þ	⊽	\$	\$	\$	\$>	<15	<10	<10
26-Aug-99	HELI-6A	29.5	10.4	₽	⊽	\$	\$	\$>	\$	<15	<10	<10
26-Aug-99	несл-6в	29.9	10.8	⊽	⊽	۵	\$	\$	\$	<15	<10	0)>
26-Aug-99	HELI-7A	6'92	15.2	₽	ī	\$	\$	\$	\$	<15	<10	01>
26-Aug-99	HELT-7B	31.9	14.4	⊽	⊽	\$	\$	۵	<\$	<15	<10	<10
-26-Aug-99	HBLI-8A	31.5	80.	⊽	v	Ŋ	\$	Ą	\$	<15	ol>	<10
26-Aug-99	HELI-8B	30.7	10.9	⊽	⊽	\$	\$	\$	\$	<15	<10	<10
26-Aug-99	HELI-9A	29.5	7.1	⊽	· 1>	\$	\$	\$	\$	<15	<10	<10
26-Aug-99	HELI-98	31.3	9.8	₹.	₹	\$	\$	\$	\$	<15	<10	<10
26-Aug-99	HELI-10A	31.1	9.5	v	⊽	۵	8	\$	8	< 5	<10	14
26-Aug-99	HELT-108	30.6	1,2	1	7	۵	\$	\$	\$	<15	<10	12

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# HISTORICAL METALS AND TOTAL PETROLEUM HYDROCARBONS AS DIESEL CONCENTRATIONS IN DISCRETE SOIL SAMPLES COLLECTED BY OTHERS VETERANS ADMINISTRATION GREATER LOS ANGELES HEALTHCARE SYSTEM LOS ANGELES, CALIFORNIA

				Total Petroleum	Unknown Petroleum						Total Petroleum	Unknown Petroleum
Date	Sample	Copper	Lead	Hydrocarbons as Gasoline	Hydrocarbon Gasoline Range	Benzene	Ethylbergene	Methyl tert- betyl ether	Toluene	Total Xylenes	Hydrocarbons as Diesel	Hydrocarboa Diesel Range
Sampted	ID No.	(mg/kg)	(mg/kg)	(πg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
02-Sep-99	ARYO-1	32.6	17.6	<b>!</b> >	₽	\$>	\$	\$>	\$	<15	<10	21
02-Sep-99	ARYO-2	32.0	8.1		⊽	۵	\$	\$	\$	<15	<10	0}>
02-Sep-99	ARYO-3	33.1	9.5	₽	ī	\$	\$	\$	₽	<15	<10	<10
02-Ѕф-99	ARY0-4	46.4	28.3			\$	\$	\$	\$	<15	<10	19
02-Sap-99	ARYO-5	17.0	9.9	⊽	⊽	Ø	\$	\$	\$	<15	<10	<10
02-Scp-99	ARYO-6	33.0	12.5	⊽	⊽	۵	\$	۵	۵	<15	01>	<10
02-S <del>cp-</del> 99	ARYO-7	34.9	8.3	₹	₽	\$	\$	\$	\$	<15	<10	> 01>
02-Sep-99	ARYO-8	33.1	<b>₽</b> , <b>₽</b>	. □	>	\$	\$>	۵	\$	<15	<10	<10
02-S <del>co</del> -99	ARYO-9	29.7	6.5	⊽	⊽	\$	۵	۵	\$	<15	<10	01>
02-Sep-99	ARYO-10	35.6	11.7	⊽	⊽	۵	δ	\$	۵	<15	<10	<10
02-Sep-99	ARYO-11	33.7	22.6	ī	7	۵	\$	\$	\$	<15	<10	20
02-Sep-99	ARYO-12	35.9	1.61	▽	₹	\$	\$	\$	۵	<15	<10	<10
02-Sep-99	ARYO-13	31.5	8.6	⊽	₽	\$	\$	۵	\$	<15	<10	<10
02-Sep-99	ARY.0-14	30.5	16.6	⊽	⊽	\$	\$	\$	\$	<15	<10	36
02-Sep-99	ARYO-15	41.2	7.0	۲۰ ا	· ·	♡	\$	\$	♡	<15	<10	<10
02-Sep-99	ARYO-16	34.3	16.1	∨	<b>\</b>	۵	\$	· 🔉	\$	<15	<10	19
02-Srp-99	ARY0-17	34.8	1.92	<1>		\$	<\$	<\$	\$	<15	<10	20



# HISTORICAL METALS AND TOTAL PETROLEUM HYDROCARBONS AS DIESEL CONCENTRATIONS IN DISCRETE SOIL SAMPLES COLLECTED BY OTHERS VETERANS ADMINISTRATION GREATER LOS ANGELES HEALTHCARE SYSTEM LOS ANGELES, CALIFORNIA

				Total	Unknown						Total	Unknown
				Petroleum Hydrocarbons	Petroleum Hydrocarbon			Methyl tert-			Petroleum Hydrocarbons	Perroleum Hydrocarbon
Drate Sampled	Sample ID No.	Copper (mg/kg)	Lead (mg/kg)	as Gasoline (mg/kg)	Gasoline Range (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	butyl ether (mg/kg)	Toluene (mg/kg)	Total Xylenes (mg/kg)	M Diesel (mg/kg)	Diesel Range (mg/kg)
08-Sep-99	ARYO-NI	29.0	13.1	1>	[>	\$	\$	\$>	\$	<15	01>	40
08-Sep-99	ARYO-N2	33.6	21.9	1>	l>	\$	\$	Ø	\$	<15	01>	19
08-Sep-99	ARYO-N3	30.4	18.7	۲۷	<1	۵	\$	\$	<\$	<15	<10	55
08-Sep-99	ARYO-N4	19.3	5.2	<1	1>	2	\$>	\$>	<\$	<15	01>	25
08-Sep-99	ARYO-NS	29.8	10.3	₹>	V	۵	\$	\$	\$	<15	<10	1.1
08-Sep-99	ARYO-N6	35.9	21.5	\ \	I>	<\$	\$	\$>	\$	<15	<10	35
08-Sep-99	ARYO-N7	30.9	8.7	· ·		\$	\$	\$	<5	<15	<10	47
08-Sep-99	ARYO-NB	23.5	6.7	⊽	1	\$	۵	\$	<\$	<15	<10	32
08-Sep-99	ARYO-N9	29.1	8.5	⊽	⊽	\$	۵	\$	\$	< 5	0!>	42
08~Sep-99	ARYO-N10	28.3	19.8	⊽		\$	\$	\$	۵	<15	<10	63
08-Sep-99	ARYO-NII	37.0	15.2	⊽	⊽	\$	۵	\$	۵	<15	<10	47
08-Sep-99	ARYO-NI2	26.0	33.0	⊽	₹	\$	\$	\$	\$	<15	<10	39
08-Sep-99	ARYO-NI3	24.1	8.6	₽	⊽	\$	\$	8	۵	<15	<10	31
08-Sep-99	ARYO-N14	26.0	8.7	⊽	⊽	\$	\$	\$	\$	< 5	<10	30
08-Sep-99	ARYO-N15	35.0	19.9	⊽	▼	♡	\$	\$	\$	<15	<10	63
08-Sep-99	ARYO-NI6	29.1	13.9	7	⊽	♥	\$	\$	\$	<15	<10	61
08-Sep-99	ARYO-N17	28.1	8.9		<	\$	\$	\$	D	<15	<10	34

November 6, 2000

### ASBESTOS-CONTAINING MATERIAL SURVEY

11301 Wilshire Boulevard Santa Monica, California

Project No. 21397

Prepared For



Prepared By

2309 Pacific Coast Highway, Suite 206 Hermosa Beach, CA 90254

**AE** 81-114

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### 1.0 SCOPE OF WORK

This report documents the methods and findings of an asbestos-containing material survey on a pile of rubble located at the 11301 Wilshire Boulevard in the City of Santa Monica, California. The pile of rubble was formerly part of the old hospital.

The purpose of this asbestos survey was to collect a limited number of samples to try to determine if the building materials could be a source of airborne asbestos contamination to the users of the athletic fields to the north of the pile of rubble.

On October 26, 2000, Joseph P. Derhake, a Certified Asbestos Consultant, conducted a comprehensive survey for the presence of asbestos-containing materials (ACM) in the demolition debris at the subject site. The survey consisted of a visual inspection and the collection of bulk samples using non-destructive techniques. The scope of AEI's services is summarized below:

- An initial investigation of all accessible areas to identify suspect ACM;
- Physical assessment of suspect materials;
- The collection of samples from suspect materials;
- Analyzed and collected nine bulk samples and three soil samples; and
- Prepare the results in a written report, including survey methods, findings, and recommendations.

### 2.0 SITE DESCRIPTION

### 2.1 Site Location and Description

The rubble pile is located on United States Veterans Administration Property on the west side of Los Angeles. The property is located to the southeast of the intersection of Sunset Boulevard and Barrington Avenue. An area of the Veterans Administration property north of the rubble pile is currently undergoing grading for the construction of playing fields and playing courts.

The building materials surveyed were located south of the athletic fields between the athletic fields and the wetlands. Please refer to Figure 1 for a Vicinity Map. These materials are the remains of the old hospital that was demolished. The building materials are all in rubble on the side of an embankment. The rubble pile is now overgrown with trees and bushes.

### 3.0 METHODOLOGY

### 3.1 Material Sampling

The demolition debris was visually inspected and potential ACMs were identified. The potential ACMs were then grouped into homogeneous materials; materials that share the same texture, color, use, and appear to have been applied at approximately the same time. Once the homogeneous materials had been identified, representative bulk samples were collected and then submitted to Scientific Laboratories in Carson, California, under proper chain of custody, and analyzed for asbestos content using Polarized Light Microscopy (PLM).

### 3.2 Analytical Methods

All bulk samples were analyzed using PLM/DS in accordance with the Environmental Protection Agency's (EPA) "Interim Method of Determination of Asbestos in Bulk Insulation Samples" (EPA-600-R-93-116, July, 1993). California Department of Occupational Safety and Health regulations defines asbestos-containing materials as those materials having an asbestos content greater than one tenth of one percent (>0.1%). There is currently no scientifically approved or technologically reliable method for the quantification of asbestos content below one percent (<1%).

When "None Detected" (ND) appears in this report, it's interpreted as meaning no asbestos was observed in the sample above the reliable limit of detection for the PLM method (1%). When "Trace" appears in this report, it's interpreted as meaning asbestos was observed in the sample below the reliable limit of detection for the PLM method (<1%).

### 3.3 Inaccessible Areas

AEI was only able to partially sample the demolition debris as the large majority of the debris is buried. AEI was granted full and complete access to the subject property.

The survey was limited by the number of samples as well as the access to materials. There was no attempt made to sample building materials higher up on the embankment.

### 4.0 FINDINGS

Suspect asbestos-containing materials sampled included concrete piping, structural concrete, insulation pipe wrap, white floor tile and soil.

Analytical results for sampled materials indicated that asbestos is present in three of the materials sampled. The following tables summarize the results:

Summary Table - Building 1

		minary ratio – Di		
Sample #	Material	Location 3	Asbestos +>	Friable
A STATE OF THE	Fall Walk Res	A PARTY OF A	(Content (%)	
AEI-CP-1	Concrete pipe	Construction	ND	No
		debris pile		
AEI-CP-2	Concrete pipe	Construction	ND	No
		debris pile		
AEI-CP-3	Concrete pipe	Construction	10%	No
		debris pile	Chrysotile,	
			4%	
			Crocidolite	
AEI-SC-4	Structural	Construction	ND	No
	concrete	debris pile		
AEI-SC-5	Structural	Construction	ND	No
	concrete	debris pile		
AEI-SC-6	Structural	Construction	ND	No
	concrete	debris pile		
AEI-S-7	Soil	Construction	ND	NA
		debris pile		
AEI-S-8	Soil	Construction	ND	NA
		debris pile		
AEI-S-9	Soil	Construction	ND	NA
		debris pile	_,	
AEI-PW-10	Insulation wrap	Construction	ND	No
		debris pile		
AEI-PW-12	Insulation wrap	Construction	ND	No
		debris pile		
AEI-T-11	White floor tile	Construction	5%	Nο
		debris pile	Chrysotile	

ND = Non-Detect

The white floor tile as well as one concrete pipe were found to contain detectable levels of asbestos.

### 5.0 CONCLUSIONS AND RECOMMENDATIONS

AEI Consultants (AEI) has performed this asbestos survey, in conformance with the guidelines provided by AHERA, for the demolition debris located south of the athletic fields at the 11301 Wilshire Boulevard in the City of Los Angeles, California.

The white floor tile as well as the concrete pipe were found to contain detectable levels of asbestos. Neither of these materials are friable.

The majority of the building materials observed were structural concrete, brick, and rebar. There was very little floor tile visible and there was only one pipe exhibiting the same physical appearance as the pipe found to contain asbestos. There are likely other materials within the debris pile that contain asbestos, but the vast majority of the materials in the debris pile do not appear to contain asbestos.

In AEI's opinion, none of the materials sampled have the potential to significantly expose users of the athletic fields to the north of the debris piles.

### 6.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

AEI Consultants (AEI) has performed this asbestos-containing materials survey, in conformance with the guidelines provided by AHERA, for the demolition debris pile located at 11301 Wilshire Boulevard in the City of Los Angeles, California.

Prepared by:

Joseph P. Derhake, PE, CAC Principal

Reviewed by:

Bryan Harvey Project Manager



### SCIENTIFIC LABORATORIES OF CALIFORNIA, INC.

24416 SOUTH MAIN STREET • SUITE 308 **CARSON, CA 90745** 

FAX:

### PLM Bulk Asbestos Report

All Environmental, Inc.

Attn: Mauricio Escobar 2309 Pacific Coast Highway

Suite 206

Hermosa Beach, CA 90254

Date Received

10/27/2000 Scilab Job No.

900101658

Date Examined

10/29/2000 P.O.# 21379

Page 2 of 3

RE: 21379; VH Medical Center

Client No. / HGA

Lah No.

Asbestos Present

Total % Asbestos

BS-SC-6

900101658-06

No

NAD

Location: Concrete

Description: Off-white, Homogeneous, Cementitious, Bulk Material

Asbestos Types:

Other Material: Non-fibrous 100. %

BS-S-7

900101658-07

No

NAD

Location: Soil/Soil

Description: Brown, Heterogeneous, Bulk Material

Asbestos Types:

Other Material: Non-fibrous 100. %

BS-5-8

900101658-08

No

NAD 1

Location: Soil/Soil

Description: Light Brown, Heterogeneous, Bulk Material

Asbestos Types:

Other Material: Non-fibrous 100. %

BS-S-9

900101658-09

No

NAD

Location: Soil/soil

Description: Brown, Heterogeneous, Bulk Material

Asbestos Types:

Other Material: Non-fibrous 100. %

BS-PW-10

900101658-10

Νo

NAD

Location: Pipe Way/Insulation Wrap

Description: Beige, Homogeneous, Bulk Material

Asbestos Types:

Other Material: Cellulose 30. %, Non-fibrous 70. %



### SCIENTIFIC LABORATORIES OF CALIFORNIA, INC.

24416 SOUTH MAIN STREET . SUITE 308 **CARSON, CA 90745** 

FAX

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Date Received

10/27/2000 SciLab Job No.

900101658

Date Examined

10/29/2000 P.O.# 21379

Page 1 of 3

RE: 21379; VH Medical Center

Client No. / HGA

Lab No.

Ashestos Present

Total % Asbestos

BS-CP-1

900101658-01

No

NAD

Location: Concrete/Contrete Pipe (1)

Description: Grey, Homogeneous, Cementitious, Bulk Material

Asbestos Types:

Other Material: Non-fibrous 100, %

BS-CP-2

900101658-02

No

NAD

Location: Concrete/Contrete Pipe (1)

Description: Grey, Homogeneous, Cementitious, Bulk Material

Asbestos Types:

Other Material: Non-fibrous 100, %

BS-CP-3

900101658-03

Yes

20 %

Location; Controle/Pipe (2)

Description: Grey, Homogeneous, Cementitious, Bulk Material

Asbestos Types: Chrysotile 16. %, Crocidolite 4. %

Other Material: Non-fibrous 80. %

BS-SC-4

900101658-04

No

NAD

Location: Controle/Structral Concrete

Description: Black/White, Heterogeneous, Cementitious, Bulk Material

Asbestos Types:

Other Material: Non-fibrous 100. %

BS-SC-5

900101658-05

Nα

NAD

Location: Concrete/Structural Concrete

Description: Grey, Homogeneous, Cementitious, Bulk Material

Ashestos Types:

Other Material: Non-fibrous 100. %



### SCIENTIFIC LABORATORIES OF CALIFORNIA, INC.

24416 SOUTH MAIN STREET . SUITE 308 CARSON, CA 90745 FAX:

### PLM Bulk Asbestos Report

All Environmental, Inc.

Attn: Mauricio Escobar

2309 Pacific Coast Highway

Suite 206

Hermosa Beach, CA 90254

Date Received

10/27/2000 SciLab Job No.

900101658

Date Examined

10/29/2000 P.O.# 21379

Page 3 of 3

RE: 21379; VH Medical Center

Client No. / HGA

Lab No.

Asbestos Present

Total % Ashestos

BS-T-11

900101658-11.1

Yes

4%

Location: Tile/White Floor Tile

Description: White, Homogeneous, Floor Tile

Asbestos Types: Chrysotile 4. %

Other Material: Fibrous Tale 16. %, Non-fibrous 80. %

5 %

BS-T-11

900101658-11.2

Yes

Location: Tile/White Floor Tile

Description: Black, Homogeneous, Bulk Material

Asbestos Types: Chrysotile 5. % Other Material: Non-fibrous 95. %

BS-PW-12

900101658-12

No

NAD

Location: Pipe Way/Insulation Wrap

Description: Tan/White, Homogeneous, Bulk Material

Asbestos Types:

Other Material: Cellulose 40. %, Non-fibrous 60. %

### Reporting Notes:

(1) High variability may be exhibited by soil samples due to wide variations in particle and aggregate size relationships. TEM analysis is recommended for low level or negative PLM samples since only TEM can reserve fiber diameters below 0.25 microns.

Analyzed by: Fred D. Chappelear

"NAD/NSD = no asbestos/structures detected; NA = magazilyzed; Bulk Asbestos Analysis per 40 CFR 763, Subpart F. Appendix A for friable bulk insulation samples (EPA-600/M4-82-020 with current EPA clarifications) or EPA/600/R-93/116 when appropriate for other samples. Note: Inherent limitations of PLM and matrix interference render PLM as not consistently reliable in detecting low levels of asbestos in some sample types such as floor coverings and similar non-friable organically bound materials, spray-on insulation and plaster samples (see EPA Advisory for fluor tile, FR 59, 146, 38970, 8/1/94). ational Institute of Standards and Technology accreditation requirements mandate that this report must not be reproduced. except in full with the approval of the laboratory. This report relates ONLY to the items tested.

Reviewed	Ву	<u> </u>	_

ALL ENVIRONA Environmental Engineering 2200 Pacific Coast Highwa Hermosa Beach, CA 80254	& Construction y, Suite 217	Job Number: 2/379 Site Contact: Jac Re-ho Site Location: Vf Medical Caster Date: 10/26/od
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BS - 5-7	59.1	\$0/1
BS - 5-8	50/1	
BS - 5-9	Sall	
BS-PW-VI	Pipe Way	Instates Wap
BS - 7- 11	Tile	while flow Tite
BS - ?W-12	Pipe Way	Instala how
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BS-	M	C MACHINE
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### AEI Consultants Field Notes

Date
Job Number: 21397
Location: VA HOSPETAL
Personnel: Man Eyen Joe Derhaue
Notes:
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SOE, ALAN LUI AND JOHN SMERTS ON SOTE DELEMEATE ITH ITH
DISCUSSED WITH ALAN AND JOHN MOVENS BORING LOCATIONS
- 20 MOVED FROM LOVER BENCH TO UPPER BENCH - BORIJIS UNDER PROPOLED CONCRETE OR ASPHALT
- BORIJUS UNDER PROPOLED CONCRETE DR ASPHALT
AREAS MOVED AS PER JOHN
SURVEY TEAM BREEFED AS TO HAZARDS AND BOREND LOCATED (HANGET MAM
9AM - 1AM LOWER BENCH SURVEYED CONCRETE BOOKENS
DO TO THE PORT OF
1307m - 4:30 PM UPPER BENCH SURVEYED BORENE LOCATION
1.33 FM - 4:33 FM UPPER BENCH SHRVEYED BUILDE LOCATION
PLACEN AS PER ALAN
4:35 PM ALL PERSONNEL LEFT SITE
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### AEI Consultants Field Notes

Date:
Job Number: 21397
Location: VA HOSPETAL
Personnel: Matt Eyen , Joe DERHAUE , PAUL HENKSTON
Notes:
7:30 Am ARRIVE AT SITE  7:40 Am MEET DRILLEDS  8:00 Am DELIVER HEALTH AND SAFETY BORRE STRENGET  DOCLLER TO KEEP EYES ORD FOR DEBRO (SYDECTIONS POTTERN)  64005 ETC.)
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4.00 lm All Pershoosi Leavé SITE
- DEBRES
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Some BRECK FORD EN BORENOS BUT SMALL AMOUNTS  ASH PLT HAS DISTER CHEVE LAMER AT NITERIT BUS  FILL MATERIAL OUT WYCHENED AND CLAY & SELT ACORDIES
BROKEN GRECH & WHETE GLASS FORMS ON LOVER BEACH MEAN NOTHERN CHONE OF RUNNING THANK

### AEI Consultants Field Notes

Date: 10/29/00				
Job Number: 21397				
Location: VA HOSPITAL				
Personnel: Man Eyea Pau Kelza				
Notes:				
7:45 Am RAIN LAST NIGHT MADE LOVER BETCH LED,				
MUDDY PRICED EXAMENSIN BENEV WITH DREWER WE DECEDED TO POSSERO				
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9:30 Am POTTERY FOUND MEAN SOUTHPAST CORNER OF RENALLG SURL				
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11:00 AM DORILER LEAVES				
3:00 Pm HAND ANGOREN G COMPLETED				
3:45 Pm RENSATE SAMPLED FOR ANALYSIS				
4:22 PM ALL PHILSUMAL LIBRUE SOLTE				
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Syladia Wa NEOLE				
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Report

### **Environmental Assessment**

Brentwood School Athletic Fields Grading Project and Recreation Facility Development Los Angeles, California

Prepared for:

Veterans Administration Greater Los Angeles Healthcare System

23 October 2000

Project No. 20-013

Locus



### Report

### **Environmental Assessment**

Brentwood School Athletic Fields Grading Project and Recreation Facility Development Los Angeles, California

Prepared by:

Alan Lui, P.E.

Approved by:

John Schweizer, P.E.



1333 N. California Blvd., Suite 540 Walnut Creek, California 94596

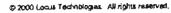


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1.40-013-02 VA HOSPITALIENV. ASSESSMENTINAL REPORT DOC (23-001-00)

Report: Environmental Assessment Brentwood School Athletic Fields Grading Project and Recreation Facility Development





### FIGURE NO. DRAWING NO. TITLE 1 20-013-A1 Site Location Map 2 20-013-A2 Site Facility Map 3 20-013-A5 Brentwood School Lease Area Site 4 20-013-A3 Brentwood School Lease Area Development Plan







APPENDIX

TITLE

A

Photographs

### ENVIRONMENTAL ASSESSMENT BRENTWOOD SCHOOL ATHLETIC FIELDS GRADING PROJECT AND RECREATION FACILITY DEVELOPMENT

### **EXECUTIVE SUMMARY**

The project being assessed by this report consists of grading, development, and construction of athletic facilities (Project) on a portion of the Veterans Administration Greater Los Angeles Healthcare System (GLAHS). The Project area is to be leased to the Brentwood School. The construction of athletic facilities at the Project area is the culmination of a series of projects that began with the extension of the City of Los Angeles Storm Drain (Phase I). The new storm drain extension was installed at the bottom of the former arroyo (Figure 3). Approximately 100,000 cubic yards of soil was placed in the arroyo as cover material for the new storm drain extension (Phase II). Construction of the athletic facilities constitutes Phase III.

The Project area is divided into two parts: an upper bench and a lower bench. The upper bench is located east of the former arroyo and will contain the planned baseball, softball and soccer fields. The lower bench was formed by the placement of fill in the former arroyo, which was filled to cover the City of Los Angeles storm drain extension. The lower bench will be the site of a planned football field, basketball courts and tennis courts.

This assessment identified potential impacts to the human environment from several sources. These include:

- Solid wastes including household debris and medical debris.
- Medical waste including low-level radioactive materials
- Physical hazards



### ENVIRONMENTAL ASSESSMENT BRENTWOOD SCHOOL ATHLETIC FIELDS GRADING PROJECT AND RECREATION FACILITY DEVELOPMENT

### 1. Introduction

This Environmental Assessment (EA) report has been prepared by Locus Technologies (Locus) under contract to Coastal Safety and Health Services, Inc. of Hermosa Beach, California, (Coastal) on behalf of the Veterans Administration Greater Los Angeles Healthcare System (GLAHS) in Los Angeles, California. This EA assesses a project consisting of grading, development, and construction of athletic facilities (Project) on a portion of the GLAHS and develop it as additional recreational facilities for the Brentwood School.

The primary purpose of an EA is to determine whether a project is likely to have a significant effect on the quality of the human environment. To achieve this purpose effectively and efficiently, this EA examines information developed during a recent project to extend a storm drain from its previous outlet structure in the northern portion of the GLAHS property approximately 2,500 lineal feet to the south through an arroyo, including associated cut and fill activities accomplished to cover the storm drain pipe and reduce the slope of the arroyo sides. The available information for the storm drain extension project includes an EA prepared by Jack K. Bryant Engineers (JKB) on behalf of the GLAHS (JKB, 1995).

In addition, this EA also incorporates information presented in the URS Greiner Woodward-Clyde Phase I Environmental Site Assessment (ESA) prepared for the Brentwood School Lease Area (URS, 1999). The Phase I ESA identified low-level radiological waste, solvents, asbestos-containing material and medical debris as potential areas of concern. With the exception of medical debris, all of these potential hazards described in the Phase I ESA were reported to be buried outside the Project area in adjacent GLAHS property.



federal regulation would be followed to the letter, if RCRA wastes were encountered. RCRA wastes were not uncovered during grading operations at the Project area (Shirtz, 2000).

Locus has prepared this EA in conformance with our proposal to Coastal, in accordance with GLAHS policies implementing the National Environmental Policy Act (NEPA), and in accord with California Environmental Quality Act (CEQA) guidelines. Where achieving our goal of effectiveness and efficiency has been enhanced by summarizing and referencing the EA prepared by JKB, we have done so.

### 2. PROJECT DESCRIPTION

The Project is situated in the northwest area of Los Angeles (Figure 1). When developed, the site will be leased by the GLAHS to the Brentwood School. Portions of the Project are located within areas that have been partially developed for a storm drain extension project. Project location, Project background, Project objectives, analysis of the alternatives to the Project, Project implementation and the completed Project characteristics for the Brentwood School lease area are described in the sections that follow.

### 2.1. Project Location

The Project occupies 20 acres of the northwest corner of the 450-acre GLAHS property. The GLAHS is located at 11301 Wilshire Boulevard in the City of Los Angeles, California, on the west side of the 405 Freeway. The Project area is bordered by the Brentwood School to the north, the remainder of the GLAHS facilities to the east and south, and the Barrington Recreational Center to the west (Figure 2).

### 2.2. Project Background

A recently completed project to extend a storm sewer through an arroyo in the northern area of the GLAHS forms the background in which the grading and additional recreation facility development project will be accomplished. The storm sewer extension project was accomplished to eliminate erosion and other damage to property and potential threats to human life, health and welfare caused by flooding and erosion events in the arroyo. The storm drain installation has involved trenching in the bottom of the arroyo; extension of a storm drain pipe approximately 2,500 linear feet in a southerly direction from an existing storm drain outlet toward an existing inlet structure at the neck of the arroyo; placement of approximately 50,000 cubic yards of soil in the upstream (northern portion) of the arroyo to cover the drain pipe; grading, construction of catch basins at approximate intervals of 300 feet, and planting to provide positive drainage and reduce the accumulation of trash in the arroyo; and construction of three acres of wetlands at the southern reach of the storm drain extension. The source of the fill earth was a



area conducted on the behalf of the GLAHS; and c) a property transaction environmental site assessment. The individual from the neighborhood who entered the site was present during the period of backfill operations to cover the drainage pipe. This individual complained of diesel odors in the stockpile of soil that was being used as the source of backfill material (Shirtz, 2000). Subsequently, a limited soil sampling program was accomplished in the lower bench area (URS 10/1999) to investigate the condition and quality of the soil being used in the arroyo as fill to cover the storm drain pipe and in the second phase of backfill work to further improve the site. Soil was investigated to a depth of 30 feet below ground surface in limited areas. In addition, a site walkdown inspection occurred as part of the ESA prepared for the Brentwood School Lease Area (URS, 12/1999). During this site walkdown inspection, demolition debris was observed on the west side of the arroyo on the GLAHS property near where it abuts the Barrington Park property (Figure 2).

### 2.3. Project Objectives

The primary objectives of this Project are to convert previously unproductive property to productive use, and to improve the sports and recreation facilities available to the children of the community served by the Brentwood School. Secondary objectives include further improvement of erosion and drainage control in the northern portion of the GLAHS property; further reduction of the potential for trash and residential debris to accumulate in undeveloped areas of the site and newly constructed wetland areas; and further improvement of the conditions at the site relative to past disposal practices. These objectives are accomplished in several ways as described in the sections that follow.

### 2.3.1. Placement of Additional Fill and Grading

Placement of additional fill in the arroyo above fill that has been used to cover the storm drain pipeline that was installed to eliminate environmental damage being caused by increased erosion will bring the elevations of the site to suitable levels for further development of the land. The additional fill and associated rough grading, flattens the areas at suitable elevations so they can be used for constructing fields and courts. This grading also acts to reduce the slope of the arroyo banks thereby reducing erosion and further improving drainage. The fill increases the already substantial barrier between the land surface, trash and medical debris known to be buried in the arroyo. Grading exposes near-surface hazards or



use could meet all of the secondary objectives of the Project. However, because of the site location, public use would likely be limited to residents of the immediate neighborhood adjacent to the GLAHS, unless there were significant development of the site and surrounding areas of the property for parking, access roads, and other public facilities.

### 2.4.3. Develop the Site for Residential or Other Commercial Use

Because of the site location, developing the site for residential or commercial use would be less likely to meet the primary objective of creating an attractive lease use for the site, and would not meet the objective of improving the facilities for the Brentwood School. The secondary objectives could be met by such a development. However, development of the site for residential or other commercial use would result in building out one of the few remaining areas of urban open space suitable for large playing fields and other sports and recreation facilities.

### 2.5. Project Implementation

The construction of athletic facilities at the Project area is the culmination of a series of projects that began with the extension of the City of Los Angeles Storm Drain (Phase I). The new storm drain extension was installed in the bottom of the arroyo located at the northwest corner of the GLAHS property. Approximately 100,000 cubic yards of soil was placed in the arroyo as cover material for the new storm drain extension (Phase II). The fill material was taken from a soil stockpile located at the southern end of the GLAHS property where a basement had been excavated for a new hospital. Construction of the athletic facilities constitutes Phase III.

Each of the three phases of work is discussed below in further detail. Discussion of Phase I and II is included only for reference purposes. Phase III is the scope of work for the purposes of this EA.

### 2.5.1. Installation of Storm Drain Extension

The Los Angeles County storm drain terminated and discharged into the north end of the former arroyo. Stormwater discharge was causing continuing erosion problems, which were impacting the Barrington Recreational Center located along the west side of the arroyo. The Los Angeles County Department of



According to Mr. John Shirtz, CIH, the onsite Health and Safety Coordinator, the medical debris was encountered just prior to the completion of excavation operations at the upper bench. Excavated soil from the upper bench area, which passed visual screening, was transported to the lower bench for use as fill material. After a sufficient quantity of soil was excavated from the upper bench to satisfy the quantity of fill material required in the lower bench area, approximately 20,000 cubic yards of imported fill material will be placed at the upper bench area. Imported fill material is being used at this stage of construction because on-site sources of fill material were exhausted during construction of the lower bench area.

### 2.5.3. Development of Recreation Facilities

A conceptual plan of the recreational facilities after construction is completed is shown on Figure 4. A soccer field will occupy the center of the upper bench. A softball field will be installed at the north end of the upper bench, and a baseball diamond will be located at the south end of the upper bench.

The entrance to the recreational facilities is located at the northwest corner of the Project area. The first parking lot will be placed at the northern most end of the lower bench, opposite the entrance. A football field surrounded by a running track will occupy the northern half of the lower bench. Basketball courts and tennis courts will be placed at the southern half of the lower bench. The second parking lot is located opposite the basketball courts along the western perimeter. The third parking lot is located adjacent to the tennis courts at the southern end of the lower bench.

### 2.6. Site Characteristics Subsequent to Project Completion

After completion of the Project, the site will have the following characteristics:

- The site will have been brought to final grade elevations by placement of clean fill, topsoil, and finish
  grading.
- Drainage will be controlled by a series of catch basins located at intervals of approximately 300 feet,
   which discharge to the extended storm drain beneath the site.



### 3. ENVIRONMENTAL IMPACT ANALYSIS

### 3.1. Solid Waste

Solid wastes have been documented to be present in the northwest area of the site and in the arroyo. Solid wastes were also encountered during installation of the storm drain extension. During the period 1960-1968, medical wastes consisting of papers and rags, syringes, labware, planchets, small animal carcasses and excreta, scintillation media and vials were buried on the northwest area of the GLAHS property where it abuts the Barrington Park property (Figure 2). Construction debris and soil from the demolition of the GLAHS Wadsworth Hospital was spread over unused areas of the GLAHS property in 1971, including the area abutting what is now Barrington Park. (EIR, 1983; URS 12/1999).

Other Historic solid waste debris consisting of glass and ceramic fragments was discovered at three places on the banks of the arroyo (Figure 2) during a field survey conducted in February 1995 (JKB, 1995). In addition; residential refuse, plastics, metal pipes, brick, headstones, asphalt, rebar, bottles, toys and hospital syringes were encountered during installation of the storm drain pipe in the bottom of the arroyo (URS, 12/1999). The location of the storm drain under the Brentwood School lease is shown on Figure 3. Construction debris was also observed to be protruding from the west slope of the arroyo in the vicinity of Barrington Park (URS, 12/1999) as shown on Figure 2. In addition, three bags of medical debris and an old ash pit were uncovered during grading operations (Shirtz, 2000) on the upper bench area of the portion of the property that will become the Brentwood School lease area. The locations where these materials were uncarthed are shown on Figure 3.

### 3.1.1. Mitigation Measures

Solid wastes present in the footprint of the Brentwood School lease area will be covered by sufficient clean fill, topsoil, and/or pavement, or will be removed from the site for off-site disposal in accordance with applicable regulations. Wastes present in the arroyo are overlain by up to 30-40 feet of soil that was used to cover the storm drain and decrease the slope of the arroyo banks. Bags of medical debris, ash, and soil unsuitable for backfill encountered during grading of the upper bench was stockpiled near the south



### 3.2.2. Apparent Medical Incinerator Ash

Ash that was uncovered in the upper bench area (Shirtz, 2000) could be medical incinerator ash. Medical incinerator ash may contain regulated metals, and other contaminants if the ash originated from "open pit" burning, which can result in incomplete combustion of the waste (Skinner, 2000).

### 3.2.2.1. Mitigation Measures

Medical incinerator ash was removed and stockpiled with unacceptable fill material outside the Project Area on GLAHS property. The stockpile will be disposed in accordance with regulations at an offsite, permitted disposal facility. Confirmatory soil sampling will be conducted in the area where the ash pit was uncovered to confirm that the ash was removed from the upper bench.

### 3.2.3. Potential Asbestos-containing Construction Debris

Construction debris, including concrete and rebar, is protruding from the ground surface near the southern junction of the roads that roughly parallel the east and west sides of the arroyo. This debris is likely the result of demolition of the GLAHS Wadsworth Hospital, subsequent to the San Fernando Earthquake in 1971. By implication, demolition debris from this source could contain asbestos (URS, 12/1999).

### 3.2.3.1.Mitigation Measures

Any construction debris found within the footprint of the Brentwood School lease area during grading will be removed and disposed off-site in accordance with applicable regulations. Construction debris protruding from the ground surface near the southern junction of the roads that parallel the east and west sides of the arroyo will be inspected and tested. If the construction debris contains asbestos, it will be removed and disposed off-site at a permitted facility. These mitigating measures will be in accordance with regulations that govern the operations and maintenance (O&M) of asbestos-containing materials, and/or the handling, transportation, and disposal of asbestos-containing wastes.

### 3.2.4. Low-level Radioactive Medical Waste and Carrier Solvents

Three former low-level radioactive medical waste burial pits are located in the vicinity of the Project area. These three burial pits are located between GLAHS Parking Lot No. 38 and the Barrington Recreational



toluene and p-dioxane. Radioisotopes were not detected by either the NRC inspection team or the radiochemist from UCLA, consequently, additional testing is not required.

### 3.2.5. Reported Diesel Fuel Issue

During installation of the storm sewer extension, a resident of the neighborhood entered the GLAHS property and made a complaint about diesel odors in the soil stockpile being used as the source of fill to cover the pipeline (Shirtz, 2000). Although there have been no known underground storage tanks located at the GLAHS site, diesel fuel was used historically to clean storage containers, and the stockpile of fill resulted from a basement excavation of one of the buildings (URS, 12/1999; JKB, 1995; EIR, 1983). In September 1999 a limited soil investigation was conducted to evaluate shallow soil conditions to depths of up to 30 feet in areas where fill had been placed within the arroyo (URS 10/1999). A single soil sample from this study contained hydrocarbons at a concentration less than 30 milligrams per kilogram (mg/kg). Other soil samples taken from the fill in the arroyo and from the stockpile used as the source of fill have contained no detectable hydrocarbons (URS, 12/1999).

#### 3.2.5.1. Mitigation Measures

The soil data available for the site are consistent with the fill in the arroyo not being contaminated by diesel fuel to levels requiring further action. However, because of the limited nature of the soil investigation to date, characterization of the near surface fill in the arroyo is incomplete. Shallow soil in the fill within the Brentwood School Lease Area footprint will be sampled with a statistically significant number of soil samples in order to confirm the acceptable condition of the fill. Shallow soil that could be disturbed by future activities at the site will be sampled. If soil with diesel concentrations at or above levels requiring further action is encountered, it will be removed and disposed off-site in accordance with applicable regulations.

#### 3.3. Air Resources

The Project area is located within the South Coast Air Basin. The South Coast Air Basin has been designated by the United States Environmental Protection Agency as a non-attainment area with respect to



## 3.3.1. Mitigation Measures

Fugitive dust emissions were controlled with a water truck, which constantly circulated throughout the Project area. The water trucks sprayed the soil surface constantly with water, thereby reducing dust emissions by approximately 50 percent or better. Unnecessary idling of heavy equipment was avoided as much as possible.

### 3.4. Earth Resources

Earth resources, such as topography, geology, hydrogeology, hydrology and water quality, at the Project area are discussed below. Facts regarding earth resources are taken from the JKB Environmental Assessment for the Storm Drain Extension Project prepared for the GLAHS, dated June 1995. The Storm Drain Extension Project area is totally included within the lower bench area for this Project, i.e., the construction of athletic facilities at the Brentwood School Lease area.

## 3.4.1. Topography

The Project area is located at the northwestern corner of the GLAHS property. The foothills of the Santa Monica Mountains are several miles to the northwest and northeast. The gently rolling hills of Beverly Hills lies to the east. The relatively flat topography of West Los Angeles lies to the south and Brentwood lies to the west.

The elevation of the Project area ranges from 473 feet above sea level at the northern end to 280 feet above sea level at the southern end. Upon completion of the Project, the approximate elevation of the lower bench will be 430 feet above sea level and the approximate elevation of the upper bench will be 468 feet above sea level.

#### 3.4.2. Geology

The Project area is located within the Sawtelle Plain of the Coastal Plain of Los Angeles County. The Sawtelle Plain is an alluvial apron formed at the foot of the Santa Monica Mountains. Erosion from historic streambeds gradually built up over geologic time to form the flatlands of West Los Angeles. The thickness of the alluvial layer ranges from 30 to 40 feet (JKB, 1995).



Surface Water Treatment Rule. LADWP expects to be back in compliance after construction of four bypass facilities is completed in 2004 (LADWP, 1999).

## 3.5. Transportation and Parking

All grading and earth moving work will take place inside the GLAHS property. Approximately 100,000 cubic yards of fill material required for the Project originated from a large soil stockpile located at the southern end of the GLAHS property, where construction of a new hospital building is ongoing. Nearly 20,000 cubic yards of imported fill material will be brought to the Project area for final grading. Vehicular traffic is minimal at the GLAHS and is comprised of employees and out-patients. Construction workers typically park their personal vehicles close to the Project area in the vicinity of the upper bench area. Earth moving equipment travel over temporary access roads between the upper and lower benches. Regular traffic patterns at the GLAHS will not be affected by construction activities at the Project area.

#### 3.6. Noise

Noise during the construction phase of the Project will emanate from diesel-powered vehicles, i.e., earth moving and grading equipment. Construction noise will be short-term and intermittent. The Los Angeles Noise Control Ordinance allows a maximum noise level of 85 dbA for non-scheduled, intermittent, short-term operation of mobile equipment at Business Structures. Noise levels measured at a distance of 50 feet for construction equipment are listed below (Bolt, 1971):

Type of Equipment	Noise Level range in dbA
Compactors (Rollers)	7 <b>0-</b> 75
Front End Loaders	70-85
Backhoes	70-95
Scrapers, Graders	80-95
Trucks	75-85
Concrete Mixers	75 <b>-8</b> 5
Cranes (movable)	75-85



## 3.10. Biological Resources

The 1995 Environmental Assessment prepared by JKB for the Los Angeles County Storm Drain Extension has an exhaustive review of biological resources at the former arroyo (JKB, 1995). In summary, no endangered or sensitive animal species were identified at the former arroyo during the biological resources survey conducted by JKB on 13 February 1995. Several coast live oak trees, which are protected by a City of Los Angeles and a Los Angeles County Ordinance, were identified during the survey. JKB concluded that filling in the arroyo to cover the storm drain extension would likely result in loss of habitat for unspecified animal species, and that urban species of birds may experience population growth at the expense of rural species. JKB also concluded that Federal and State jurisdictional wetlands are present at the former arroyo area, based on the identification of riparian vegetation during the biological resources survey.

The 1995 JKB Environmental Assessment proposed that lost coast live oak trees be replaced at a ratio of two to one. Lost wetlands habitat should be replaced at a ratio of 1.5 times the area lost due to filling the former arroyo. JKB also recommended that the fill area be landscaped with native vegetation.

## 3.11. Community Services and Utilities

The Project is not expected to significantly impact any community services and utilities, except for water supply. The Project will require significant quantities of water for dust suppression throughout construction activities. After construction is complete, water will be required for irrigation of the football field and soccer field.



# 4. ENVIRONMENTAL COMPLIANCE

This environmental assessment has been prepared in accordance with GLAHS policies implementing NEPA, and as such it conforms to CEQA guidelines for an initial study. It addresses requirements set forth in the Code of Federal Regulations, including those relating to the Clean Water Act, the Clean Air Act, and the Resource Conservation and Recovery Act. It also addresses requirements set forth in the California Code of Regulations (CCR), including CCR Title 22. Local regulations taken into account include Rules and Regulations of the South Coast Air Quality Management District.

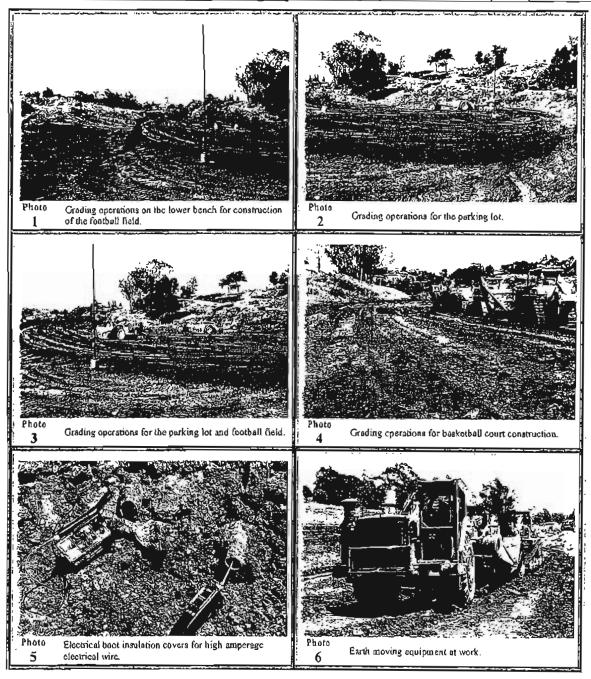


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- (Shirtz, 2000) John Shirtz, (2000), Meeting with John Shirtz and Ben Spivey at the Brentwood School Lease Area, Los Angeles, California, September 6.
- (Skinner, 2000) Electronic mail with *Memorandum* from Mr. Clint Skinner to Mr. John Schweizer, September 18, 2000.
- (UCLA, 1983) University of California at Los Angeles Laboratory of Biomedical and Environmental Sciences, (1983), Radioassay for Tritium and Carbon-14 at the Waste Disposal Site, April.

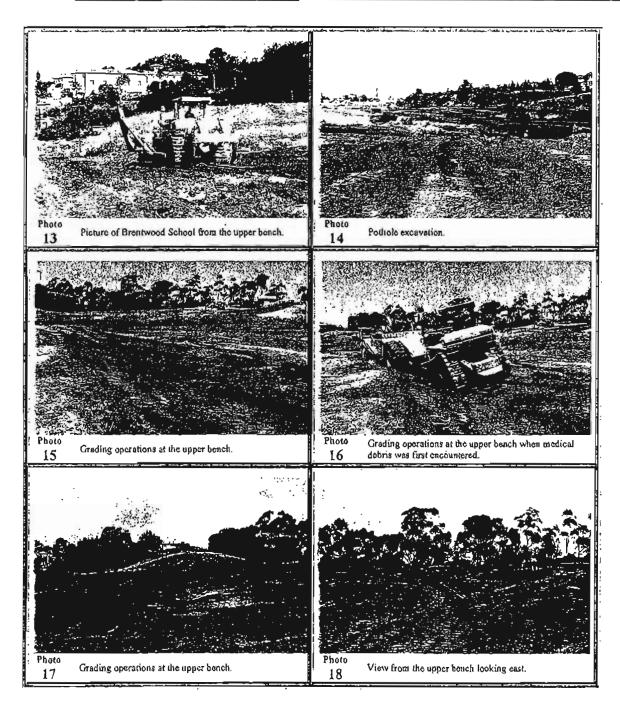


Client Name: Veterans Administration Greater Los Angeles Healthcare System (GLAHS) Photo Dates: July 7, 2000 - Photos 1-6

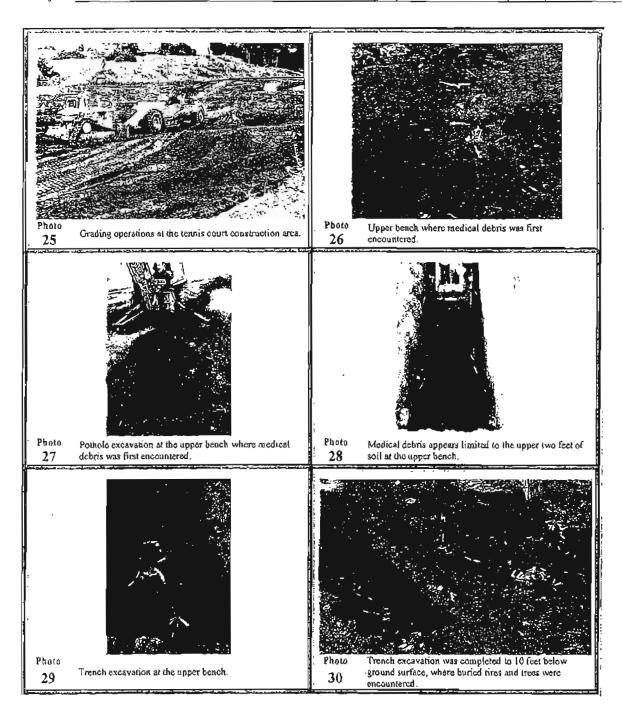


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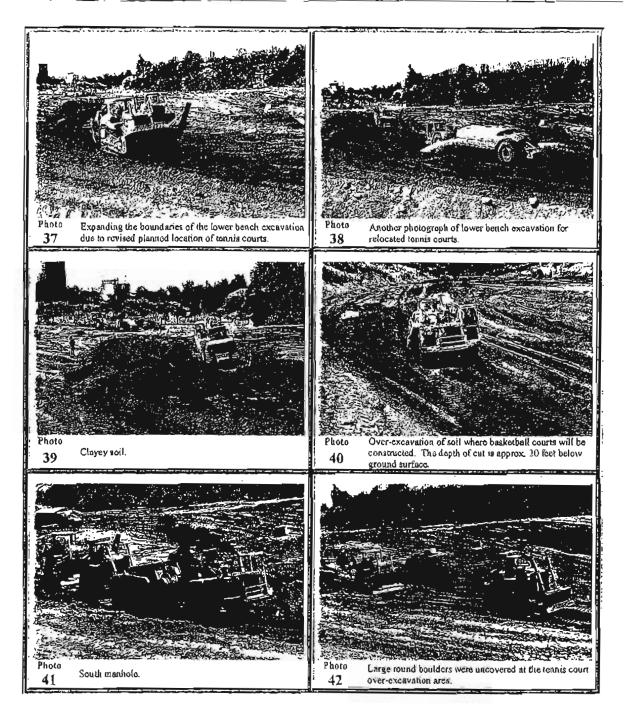
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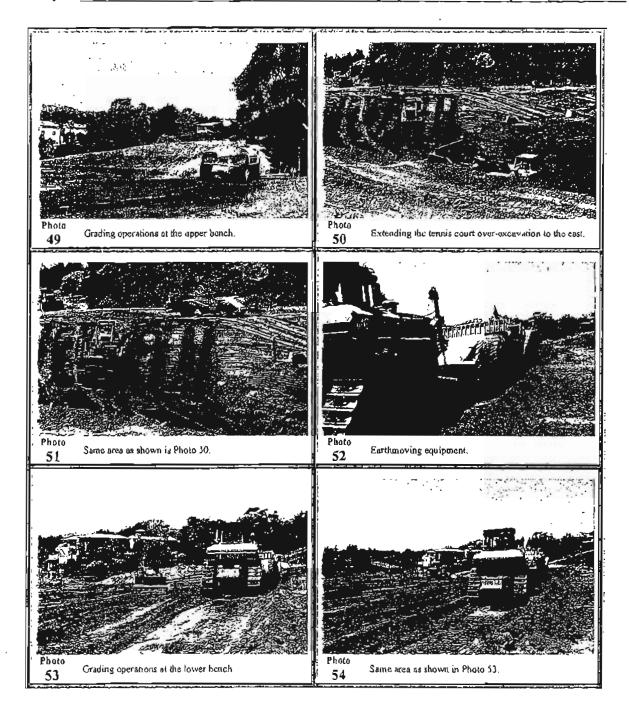
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Project: Environmental Assessment Brentwood School Athletic Fields Grading Project and Recreation Facility Development

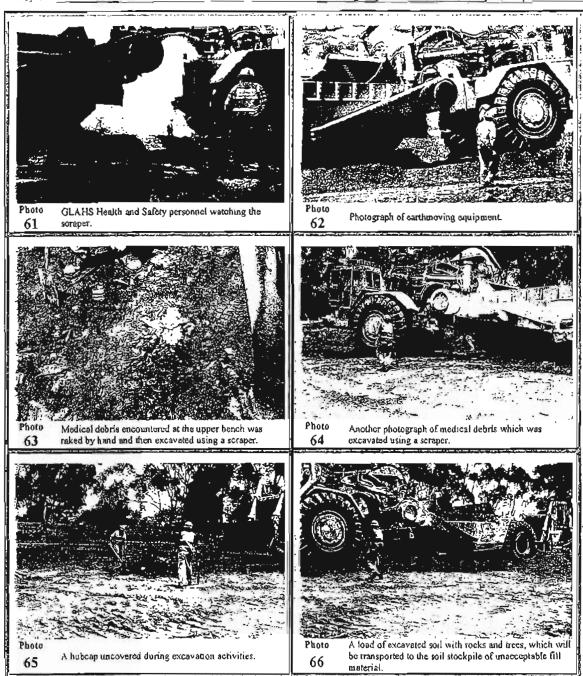


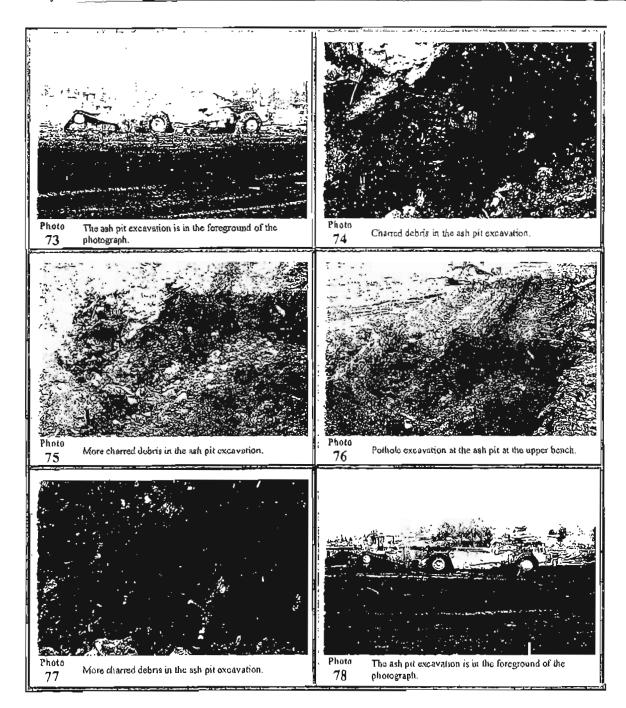
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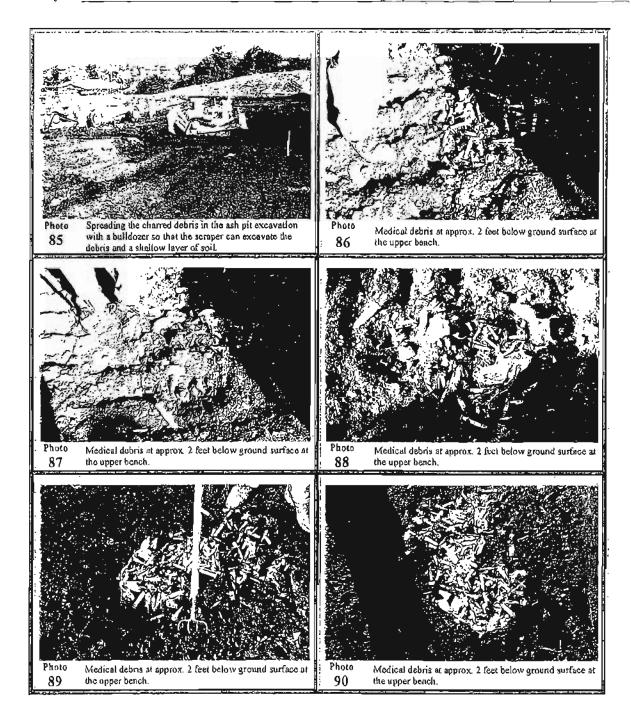


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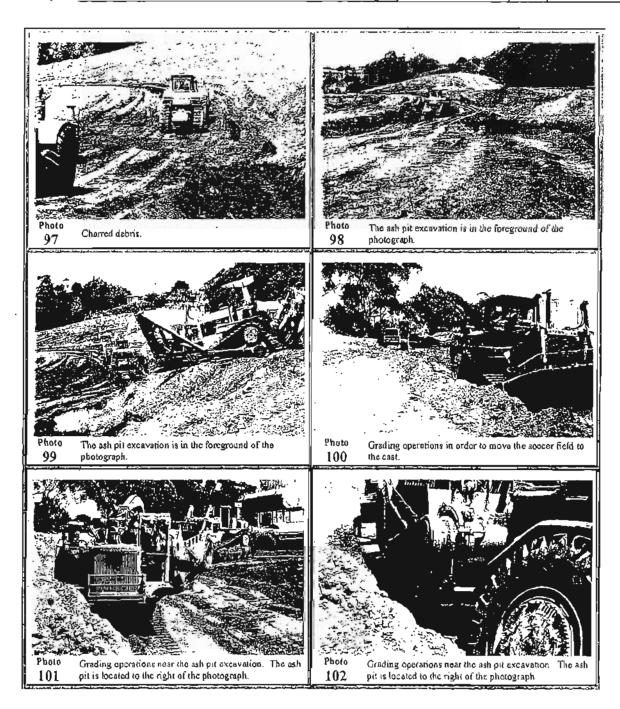
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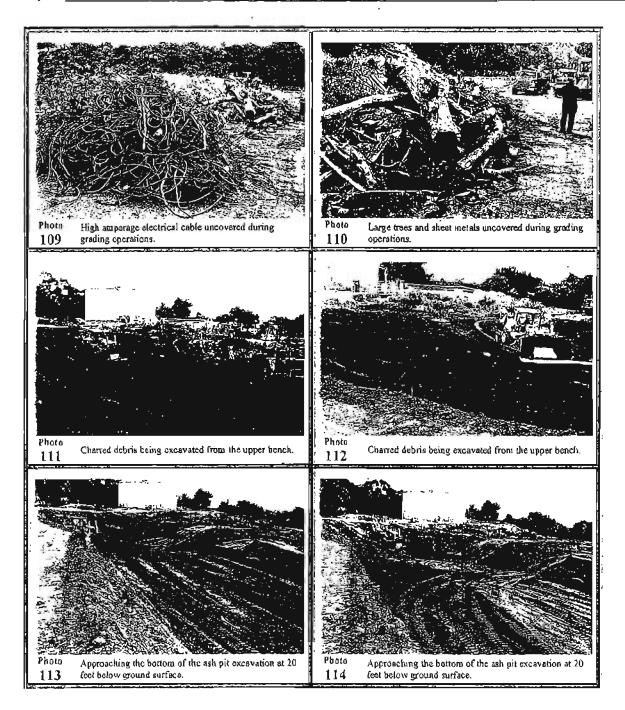


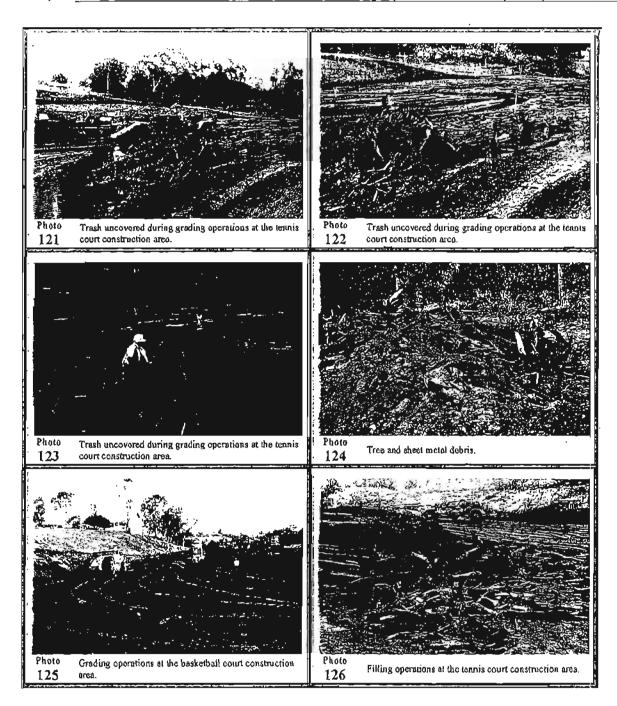


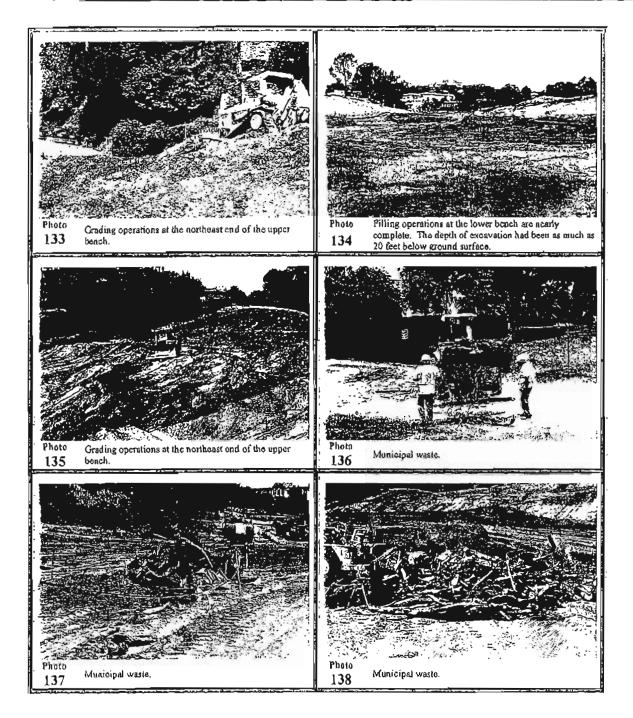


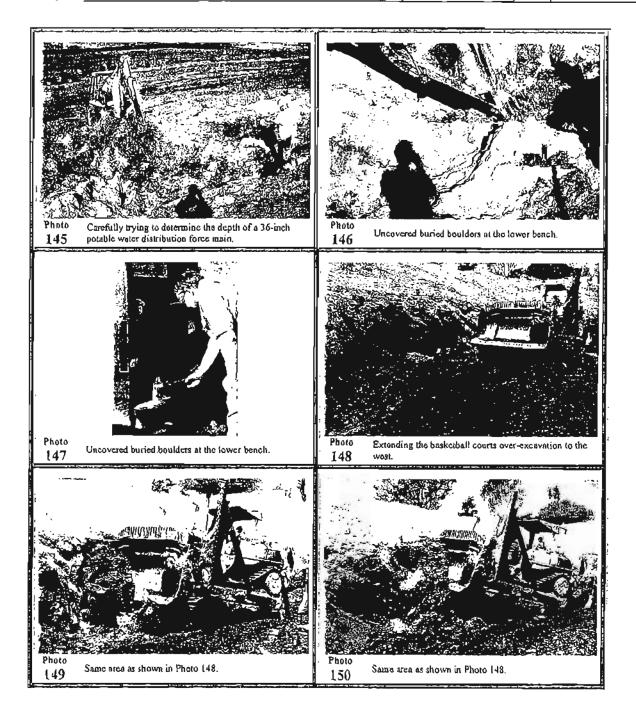
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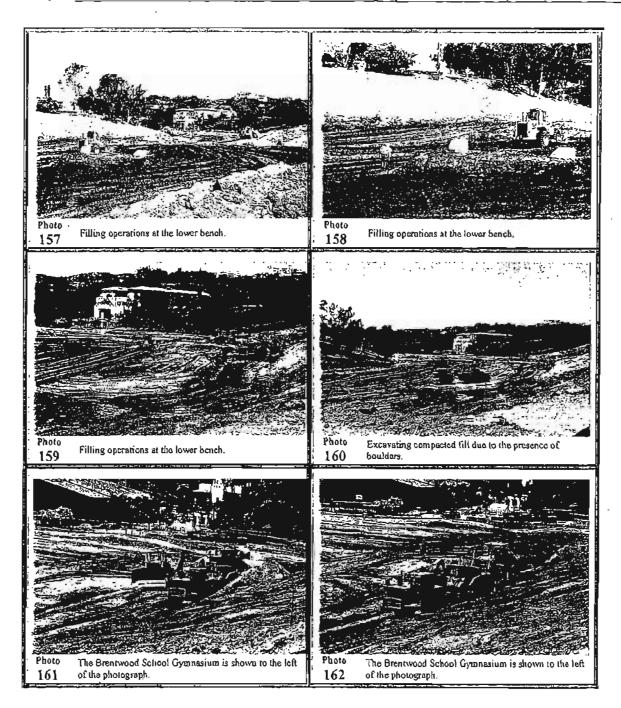




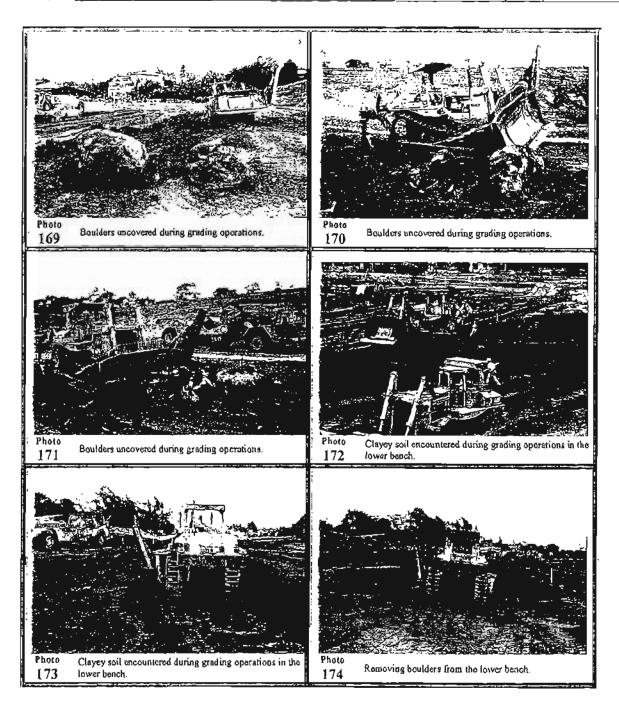


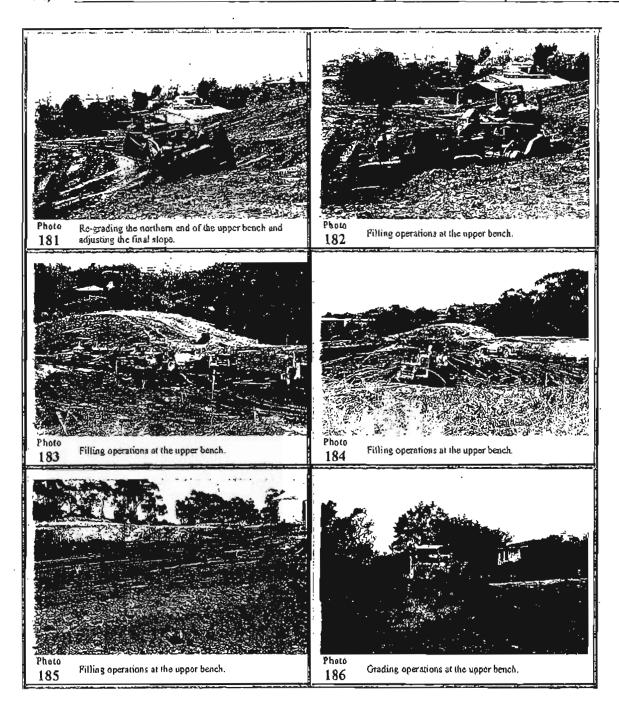


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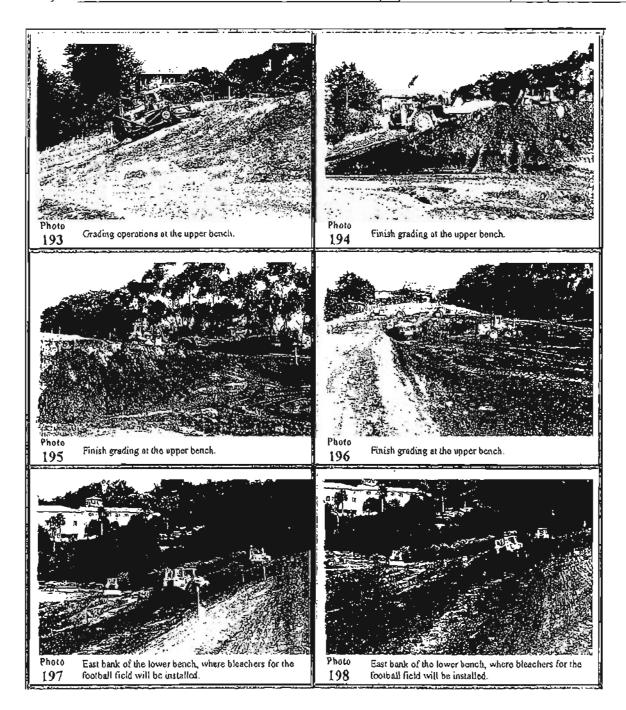
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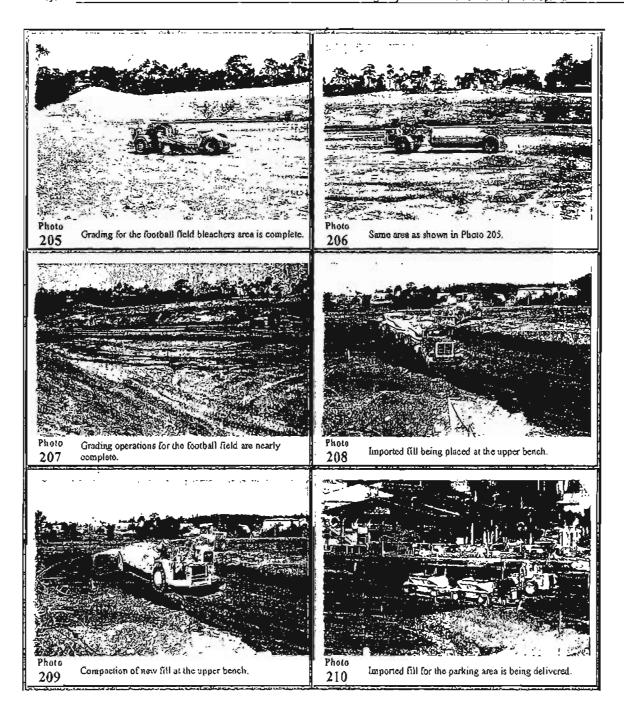
August 14, 2000 - Photos 194-196 September 5, 2000 - Photos 197-198

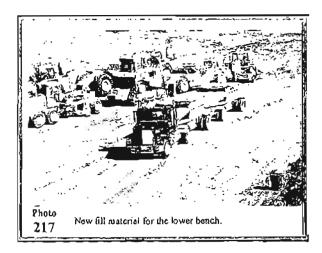


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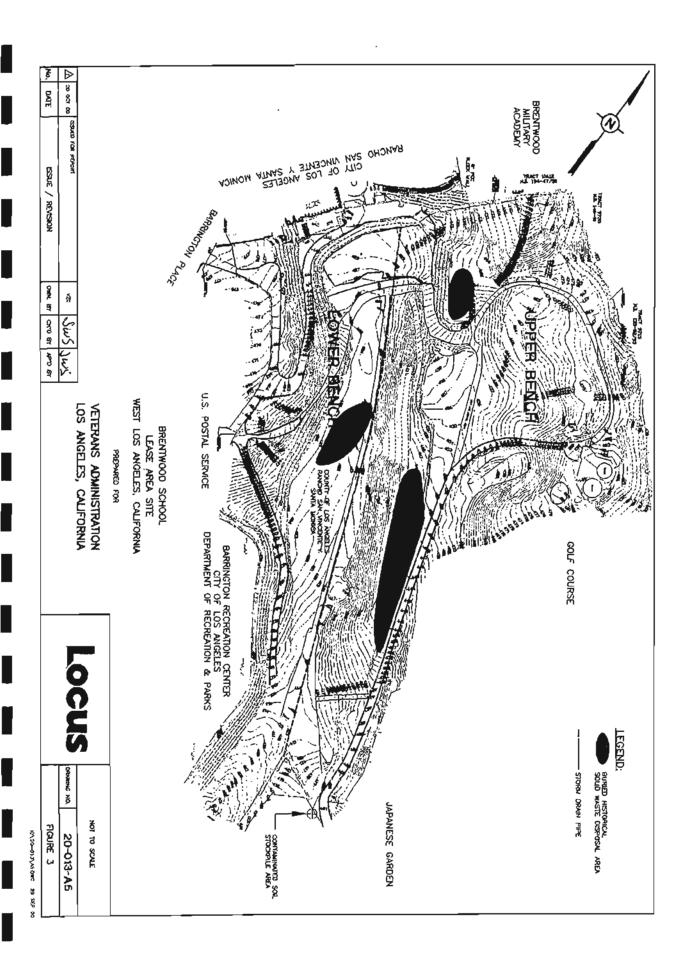
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# APPENDIX A

**PHOTOGRAPHS** 



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