

APPENDIX B

Soil Boring Logs

DATE DRILLED: 8/18/99
 LOCATION: See Figure 2

BORING NO. B2-11

ELEVATION: 1602 Ft.
 ** HAMMER WEIGHT: 140 lb.

Northing - 482802
 Easting - 675486

ELEV. MSL	DEPTH IN FEET	FIELD MOISTURE (%)	DRY DENSITY (pcf)	LAB TESTS *	BLOWS/INCHES **	SAMPLER +	SYMBOL	SOIL DESCRIPTION	MOISTURE	CONSIST.
1577	25	32	92		17/6 27/6 37/6			SILTY CLAY (CL) - cont.	wet	very stiff to hard
1577	30			G,A	10/6 21/6 25/6					very stiff
1567	35	80	51		12/6 16/6 24/6			- gray to green		
1562	40				17/6 27/6 31/6					

Bottom at 41.5 feet.

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE

ALVB W8126 1/26/00

BY:

* LAB TESTS: NR=No Recovery, C=Consolidation, A=Atterberg, Ch=Chemical test, S=Direct Shear, G=Grain-Size, E=Expansion, Sol=Solubility, Res=Resistivity, R=R-Value, ASTM D1557=Compaction test

NOTES: Ground water encountered at 18 feet during drilling.

+SAMPLER TYPE: Drive Sample 2.625" I.D. Shelby Tube Bulk Ca. S.S. Sample 1.925" I.D. SPT Sample 1.375" I.D.



GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
 SOILS AND MATERIALS TESTING

PROJECT: Henderson Water Reclamation Facility,
 Phase 1B Expansion, Site#2

BORING LOG AND TEST SUMMARY

PROJECT NO. 31-128126

PLATE
 A-9b

BORING #:	A-1	ENVIRON BORING LOG
DATE:	5/19/01	
START TIME:	07:55	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	PROJECT: Henderson, NV
DRILLER:	Bruce Ashmore	CASE # 01-2131F
RIG:	Geoprobe 66 DT	COMMENTS: Alpha Ditch, sample location 1.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	18'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	0.4	A-1 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
2-4		22	0.4		Light tan to light brown and reddish brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		24	0.4		Same as above.
6-8		18	0.3		Same as above, slightly more gravel.
8-10		20	0.4		Reddish brown mottled fine sand, well sorted and sub-angular, calcified (caliche) in the 9-11' interval (SW).
10-12		16	0.7	A-1 (10-12)	Same as above.
12-14		10	0.5		Same as above, with occasional gravel, no caliche.
14-16		20	0.2		Light brown to reddish brown mottled sand and gravel, moderately rounded and poorly sorted (SP).
16-18		22	0.2	A-1 (16-18)	Same as above to 17'; dark grey moist silty clay interface at 17' (CL-ML). WET at 18'.

COMMENTS:

Borehole A-1 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	A-2	ENVIRON BORING LOG
DATE:	5/20/01	
START TIME:	14:55	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	PROJECT: Henderson, NV
RIG:	Geoprobe 66 DT	CASE # 01-2131F
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	22'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	
		COMMENTS: Alpha Ditch, sample location 2.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	0.5	A-2 (0-1)	Tan to light brown very fine-grained silty sand (SM).
2-4		20	0.5		Light tan to light brown medium- and fine-grained silty sand with occasional gravel to 1/4-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		20	0.7		Same as above.
6-8		20	0.7		Same as above.
8-10		18	0.5		Same as above.
10-12		16	0.7	A-2 (10-12)	Same as above.
12-14		20	0.7		Sandy gravel, sub-rounded and poorly sorted, light brown, tan, and reddish brown (GP).
14-16		18	0.7		Fine- to medium-grained sub-angular sand with gravel, brown to reddish brown. Hard caliche at 16' (SW).
16-18		14	0.3		Same as above; hard caliche from 16' to 16.8'.
18-20		24	0.5		Light greyish green silty clay, moist and plastic (CL-ML).
20-22		24	0.5	A-2 (19-21)	Same as above, WET at 21'.

COMMENTS:
Rehole A-2 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	B-1	ENVIRON BORING LOG
DATE:	5/19/01	
START TIME:	15:25	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	PROJECT: Henderson, NV
DRILLER:	Bruce Ashmore	CASE # 01-2131F
RIG:	Geoprobe 66 DT	COMMENTS: Beta Ditch, sampling location 1.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	21'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	1.6	B-1 (0-1)	Tan to light brown very fine-grained silty sand (SM).
1-3		24	0.5		Light tan to light brown medium- and fine-grained sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		24	0.5		Same as above. Same as above.
5-7		20	0.5		Dark brownish-red medium sand, well sorted and sub-angular (SW).
7-9		18	0.5		Same as above.
9-11		20	0.8	B-1 (10-12)	Medium-grained poorly sorted silty sand with gravel (SP-SM).
11-13		18	0.5		Same as above; hard white caliche at 12'-13'.
13-15		14	0.5		Same as above, caliche not present.
15-17		24	0.7		Same as above.
17-19		24	0.5		Fine- to medium-grained sub-angular sand with gravel, brown to reddish-brown (SW).
19-21		22	0.5	B-1 (19-21)	Same as above, WET at approximately 20.8'.

COMMENTS:

Borehole B-1 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	B-2	ENVIRON BORING LOG
DATE:	5/18/01	
ART TIME:	13:20	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	PROJECT: Henderson, NV
RIG:	Geoprobe 66 DT	COMMENTS: Beta Ditch, sampling location 2.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	5'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.5	B-2 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		24	0.3		Light tan to light brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		24	0.3	B-2 (4-5)	Same as above.

COMMENTS:
Borehole B-2 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	B-3	ENVIRON BORING LOG
DATE:	5/18/01	
START TIME:	17:50	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	PROJECT: Henderson, NV
RIG:	Geoprobe 66 DT	CASE # 01-2131F
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH:	5'	
ORGANIC VAPOR EQUIPMENT:	MiniRAE 2000 Photoionization Detector	
		COMMENTS: Beta Ditch, sampling location 3.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.7	B-3 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		22	0.4		Light tan to light brown and reddish brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		24	0.4	B-3 (4-5)	Same as above, WET at base of probe.

COMMENTS:
Borehole B-3 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	E-1	ENVIRON BORING LOG
DATE:	5/19/01	
START TIME:	14:45	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	COMMENTS: Northeastern parcel, sampling location 1.
BORING DEPTH	5'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	24	0.7	E-2 (0-1)	Tan to light brown very fine-grained silty sand (SW-SM).
1-3		24	1.0		Light tan to light brown and reddish brown medium- to fine-grained sand with occasional gravel to 1/4-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		20	1.6	E-2 (4-5)	Same as above.

COMMENTS:
Borehole E-1 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	E-2	ENVIRON BORING LOG
DATE:	5/19/01 and 5/22/01	
START TIME:	14:15	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	PROJECT: Henderson, NV
DRILLER:	Bruce Ashmore	CASE # 01-2131F
RIG:	Geoprobe 66 DT	COMMENTS: Northeastern parcel, sampling location 2.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	9'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	24	0.7	E-2 (0-1)	Tan to light brown very fine-grained silty sand (SW-SM).
1-3		22	1.0		Light tan to light brown and reddish brown medium- to fine-grained sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		18	0.4	E-2 (4-5)	Same as above.
5-7		22	0.7		Brown to reddish brown and tan gravelly sand, poorly sorted and sub-angular (SW).
7-9		24	1.6	E-2 (6-8)	Same as above, WET at 8'.

COMMENTS:
Collected intervals deeper than 5' below ground surface on 5/22/01.
Borehole E-2 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-1	ENVIRON BORING LOG
DATE:	5/21/01	
START TIME:	09:15	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	PROJECT: Henderson, NV
DRILLER:	Bruce Ashmore	CASE # 01-2131F
RIG:	Geoprobe 66 DT	COMMENTS: Pond 1.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	20'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	0.7	P-1 (0-1)	Tan to light brown fine-grained sandy silt with gravel (ML).
2-4		24	0.5		Light tan to light brown medium- and fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		20	0.7		Same as above.
6-8		24	0.6		Same as above, slightly increasing gravel content.
8-10		18	0.5		Same as above.
10-12		20	0.5	P-1 (10-12)	Same as above, slightly calcified ("pre-caliche").
12-14		20	0.4		Sandy gravel, sub-rounded and poorly sorted, light brown, tan, and reddish brown (GP).
14-16		24	0.5		Fine to medium-grained sub-angular sand with gravel, brown to reddish brown; hard caliche layer at 15' to 16' (SW).
16-18		22	0.4		Same as above, no caliche.
18-20		20	0.4	P-1 (18-20)	Same as above; brownish green WET silty clay at 19.5' (CL-ML).

COMMENTS:

rehole P-1 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-2	ENVIRON BORING LOG
DATE:	5/20/01	
START TIME:	11:15	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	18'	COMMENTS: Pond 2.
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	0.9	P-2 (0-1)	Tan to light brown very fine-grained silty sand (SW-SM).
2-4		20	0.5		Light tan to light brown medium- and fine-grained silty sand with occasional gravel to 1/4-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		24	0.7		Same as above.
6-8		20	0.7		Same as above.
8-10		14	0.7		Same as above, becoming more calcified ("pre-caliche").
10-12		16	1.3	P-2 (10-12)	Same as above.
12-14		20	0.8		Sandy gravel, sub-rounded and poorly sorted, light brown, tan, and reddish brown (GP).
14-16		14	0.7		Fine- to medium-grained sub-angular sand with gravel, brown to reddish brown (SW).
16-18		22	0.9	P-2 (16-18)	Same as above; hard caliche at 18' (Geoprobe refusal).

COMMENTS:
Borehole P-2 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-3	ENVIRON BORING LOG
DATE:	5/20/01	
START TIME:	09:05	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	PROJECT: Henderson, NV CASE # 01-2131F COMMENTS: Pond 3.
BORING DEPTH	20'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	1.0	P-3 (0-1)	Tan to light brown very fine-grained silty sand (SW-SM).
2-4		24	0.5		Light tan to light brown medium- and fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		22	0.5		Light brown to reddish brown gravelly sand, subangular (SP).
6-8		20	0.5		Same as above.
8-10		18	0.5		Same as above.
10-12		20	1.4	P-3 (10-12)	Same as above, becoming more calcified ("pre-caliche").
12-14		18	0.5		Same as above, grain size increasing slightly, increasing silty sand content, some gravel (SP-SM).
14-16		14	0.5		Fine- to medium-grained sub-angular sand with gravel, brown to reddish brown (SW).
16-18		24	0.7		Same as above to 16.5'. Dark greyish brown moist silty clay at 16.5' (CL-ML).
18-20		24	0.5	P-3 (18-20)	Same clay as above, WET and loose at 19.5'.

COMMENTS:

Borehole P-3 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-4	ENVIRON BORING LOG
DATE:	5/21/01	
START TIME:	14:55	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	PROJECT: Henderson, NV
DRILLER:	Bruce Ashmore	CASE # 01-2131F
RIG:	Geoprobe 66 DT	COMMENTS: Pond 4.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	22'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	0.8	P-4 (0-1)	Tan to light brown very fine-grained silty sand with some gravel (SP-SM).
2-4		22	0.5		Light tan to light brown and reddish brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		22	0.5		Same as above.
6-8		20	0.6		Same as above.
8-10		18	0.5		Reddish brown mottled fine to medium sand with minor gravel, moderately sorted and sub-angular (SW).
10-12		16	0.6	P-4 (10-12)	Same as above.
12-14		18	0.8		Same as above, grading to a gravelly sand (SW).
14-16		20	0.6		Light brown to reddish brown mottled sand and gravel, moderately rounded and poorly sorted (SW).
16-18		20	0.8		Light brown to tan sandy silt with gravel (ML).
18-20		14	0.6		Same as above, trace gravel (ML).
20-22		10	0.5	P-4 (20-22)	Same as above, WET at 21.6'.

COMMENTS:

Borehole P-4 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-5	ENVIRON BORING LOG
DATE:	5/19/01	
START TIME:	10:55	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	PROJECT: Henderson, NV
RIG:	Geoprobe 66 DT	CASE # 01-2131F
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	18'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	
COMMENTS: Pond 5.		

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	2.2	P-5 (0-1)	Tan to light brown very fine-grained silty sand with some gravel (SP-SM).
2-4		22	1.0		Light tan to light brown and reddish brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		18	0.4		Same as above.
6-8		20	0.8		Same as above.
8-10		1	0.6		Reddish brown mottled fine to medium sand with minor gravel, moderately sorted and sub-angular (SW).
10-12		10	1.2	P-5 (10-12)	Same as above.
12-14		19	0.8		Same as above, grading to a gravelly sand (SW).
14-16		22	0.6		Light brown to reddish brown mottled sand and gravel, moderately rounded and poorly sorted (SW).
16-18		20	1.4	P-5 (16-18)	Light brown to tan sandy gravel (GP); WET at core tip.

COMMENTS:

Borehole P-5 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-6	ENVIRON BORING LOG
DATE:	5/21/01	
START TIME:	07:30	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO.:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	COMMENTS: Pond 6.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA.:	2-inch internal diameter	
BORING DEPTH	20'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	1.2	P-6 (0-1)	Tan to light brown very fine-grained sandy silt with gravel (SP-SM).
2-4		24	0.9		Light tan to light brown medium- and fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		20	0.7		Same as above.
6-8		24	0.9		Same as above, slightly increasing gravel content (SP-SM).
8-10		18	0.5		Same as above.
10-12		20	0.9	P-6 (10-12)	Same as above, slightly calcified ("pre-caliche").
12-14		20	0.7		Sandy gravel, sub-rounded and poorly sorted, light brown, tan, and reddish brown (GP).
14-16		24	0.7		Fine to medium grained sub-angular sand with gravel, brown to reddish brown (SP).
16-18		22	0.7		Same as above.
18-20		20	0.7	P-6 (18-20)	Medium and fine sand, moderately sorted and sub-rounded (SW), slightly calcified, WET at 20'.

COMMENTS:
 Borehole P-6 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-7	ENVIRON BORING LOG
DATE:	5/17/01 and 5/21/01	
START TIME:	16:01	PROJECT: Henderson, NV
LOGGED BY:	Doug Errett (ENVIRON)	CASE # 01-2131F
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	COMMENTS: Pond 7.
SAMPLING METHOD:	4-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	20'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	24	6.0	P-7 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		24	9.2	P-7 (2-3)	Brown to reddish brown medium- to fine-grained silty sand with occasional gravel to 1/4-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		18	2.0		Same as above, tan to light brown.
5-7		12	0.1		Same as above, slightly calcified (caliche).
7-9		9	0.0		Same as above, well calcified white to light tan caliche.
9-10		16	0.1	P-7 (10-12)	Same as above, very little calcification.
10-12		18	0.0		Same as above, increasing gravel content (SP-SM).
12-14		20	0.0		Brown to reddish brown gravelly sand, sub-rounded and poorly sorted (GP).
14-16		10	0.2		Same as above.
16-18		18	0.0		Same as above.
18-20		18	0.1	P-7 (19-21)	Same as above.
20-22		20	0.0		Greenish grey moist plastic silty clay (CL-ML), WET at 20.5'.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
<p>COMMENTS: Collected intervals deeper than 5' below ground surface on 5/21/01. ehole P-7 plugged on 5/22/01 using dry bentonite pellets, filled to grade.</p>					

BORING #:	P-8	ENVIRON BORING LOG
DATE:	5/19/01	
START TIME:	09:30	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	PROJECT: Henderson, NV CASE # 01-2131F COMMENTS: Pond 8.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH:	18'	
ORGANIC VAPOR EQUIPMENT:	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	0.4	P-8 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
2-4		24	0.4		Light tan to light brown and reddish brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		20	0.4		Same as above.
6-8		20	0.3		Same as above.
8-10		14	0.6	P-8 (10-12)	Reddish brown mottled fine sand, well sorted and sub-angular, calcified (caliche) in the 9' to 11' interval (SW).
10-12		10	0.3		Same as above.
12-14		19	0.5		Same as above, grading to a gravelly sand (SP).
14-16		22	0.4		Light brown to reddish brown mottled sand and gravel, moderately rounded and poorly sorted (SP).
16-18		20	0.5	P-8 (16-18)	Same as above to 16.5'; dark brownish grey moist clay interface at 16.5' (CL-ML). WET at 17.8'.

COMMENTS:

Borehole P-8 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-9	ENVIRON BORING LOG
DATE:	5/17/01	
START TIME:	16:01	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	PROJECT: Henderson, NV
RIG:	Geoprobe 66 DT	CASE # 01-2131F
SAMPLING METHOD:	4-foot continuous stainless steel soil core	COMMENTS: Pond 9.
BORING DIA:	2-inch internal diameter	
BORING DEPTH	20'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	24	0.8	P-9 (0-1)	Brown medium-grained gravelly sand, unsorted (SP).
1-3		24	1.8	P-9 (2-3)	Same as above, gravel to 1" diameter.
3-5		18	0.6		Same as above, tan to light brown.
5-7		12	0.0		Brown fine- to medium-grained moderately sorted sub-angular sand, slightly calcified (caliche) (SW).
7-9		12	1.2		Same as above, well calcified white to light tan caliche.

COMMENTS:

Boring terminated at 9' below ground surface due to refusal.
Borehole P-9 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-10	ENVIRON BORING LOG
DATE:	5/17/01	
START TIME:	10:55	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	
SAMPLING METHOD:	4-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH:	19'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	PROJECT: Henderson, NV
		CASE # 01-2131F
		COMMENTS: Pond 10 near western entrance to site.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	19	1.1	P-10 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		16	0.2		Brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		23	0.4		Same as above.
5-7		24	0.0		Same as above.
7-10		32	0.0		Same as above, slightly calcified (caliche).
10-11		13	0.4	P-10 (10-11)	Same as above, still calcified.
11-13		17	0.0	P-10 (12-12.5)	Mottled brown and reddish brown medium-grained sub-angular sand with little gravel (SW).
13-15		22	0.0		Same as above.
15-17		21	0.0	P-10 (16.5-17.5)	Same as above.
17-19		24	0.0		Same as above; WET at 17.5'.

COMMENTS:
Borehole P-10 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-11	ENVIRON BORING LOG
DATE:	5/18/01 and 5/22/01	
START TIME:	07:40	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	
SAMPLING METHOD:	4-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	17'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	PROJECT: Henderson, NV
		CASE # 01-2131F
		COMMENTS:
		Pond 11.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.3	P-11 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		24	0.4		Brown to reddish brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		20	0.0	P-11 (4-5)	Same as above, tan to light brown.
5-7		24	0.4		Same as above.
7-9		20	0.2		Same as above, slightly more gravel (SP-SM).
9-11		18	0.5		Light brown and reddish brown gravelly sand, gravel to ½" diameter, sub-angular and poorly sorted (SP).
11-13		22	0.9		Same as above, slightly calcified.
13-15		24	0.7		Light brown large-grained sand with some gravel (SW).
15-17		24	2.1	P-11 (15-17)	Same as above, WET at 16.8'.

COMMENTS:

Collected intervals deeper than 5' below ground surface on 5/22/01.
Borehole P-11 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-12	ENVIRON BORING LOG
DATE:	5/18/01	
START TIME:	08:15	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	COMMENTS: Pond 12.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	5'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.3	P-12 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		24	0.4		Brown to reddish brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		22	0.0	P-12 (4-5)	Same as above.

COMMENTS:
Borehole P-12 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-13	ENVIRON BORING LOG
DATE:	5/18/01	
START TIME:	13:20	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO.:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	PROJECT: Henderson, NV CASE # 01-2131F COMMENTS: Pond 13.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	5'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.5	P-13 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		24	0.3		Brown to reddish brown medium- to fine-grained silty sand with occasional gravel to 1/4-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		20	0.3	P-13 (4-5)	Same as above.

COMMENTS:
Borehole P-13 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-14	ENVIRON BORING LOG
DATE:	5/18/01	
START TIME:	09:45	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	COMMENTS: Pond 14.
BORING DEPTH	5'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.5	P-14 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		24	0.4		Brown to reddish brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		24	0.4	P-14 (4-5)	Same as above.

COMMENTS:
Borehole P-14 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-15	ENVIRON BORING LOG
DATE:	5/18/01	
START TIME:	14:30	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	COMMENTS: Pond 15.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	5'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.5	P-15 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		24	0.3		Tan, brown, and reddish brown medium- to fine-grained silty sand with occasional gravel to 1/4-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		22	0.3	P-15 (4-5)	Same as above.

COMMENTS:
Borehole P-15 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-16	ENVIRON BORING LOG
DATE:	5/18/01	
START TIME:	09:45	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	PROJECT: Henderson, NV
RIG:	Geoprobe 66 DT	CASE # 01-2131F
SAMPLING METHOD:	2-foot continuous stainless steel soil core	COMMENTS: Pond 16.
BORING DIA:	2-inch internal diameter	
BORING DEPTH	5'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.4	P-16 (0-1)	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		23	0.3		Brown to reddish brown medium- to fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		24	0.0	P-16 (4-5)	Same as above, slightly more gravelly (SP-SM).

COMMENTS:
Borehole P-16 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	P-17	ENVIRON BORING LOG
DATE:	5/18/01 and 5/22/01	
START TIME:	15:15	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	PROJECT: Henderson, NV
RIG:	Geoprobe 66 DT	CASE # 01-2131F
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	9'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	
		COMMENTS: Pond 17.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.7	P-17 (0-1) DUP-2	Tan to light brown very fine-grained sandy silt, well sorted (ML).
1-3		22	0.4		Light tan to light brown and reddish brown medium- to fine-grained silty sand with occasional gravel to 1/4-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		24	0.4	P-17 (4-5)	Same as above.
5-7		22	0.5		Dark brown gravelly sand, poorly sorted and sub-angular (SP).
7-9		22	0.6	P-17 (6-8)	Same as above, WET at 8.5'.

COMMENTS:
Collected intervals deeper than 5' below ground surface on 5/22/01.
Borehole P-17 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	S-1	ENVIRON BORING LOG
DATE:	5/19/01	
ART TIME:	15:25	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	PROJECT: Henderson, NV
DRILLER:	Bruce Ashmore	CASE # 01-2131F
RIG:	Geoprobe 66 DT	COMMENTS: Future "A" Street alignment, sampling location 1.
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	17'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-1	N/A	12	0.7	S-1 (0-1)	Tan to light brown very fine-grained silty sand (SW-SM).
1-3		22	0.5		Light tan to light brown medium- and fine-grained sand with occasional gravel to 1/4-inch diameter, poorly sorted and sub-angular (SP-SM).
3-5		24	0.3		Same as above. Same as above, slightly more gravel (SP-SM).
5-7		22	0.7		Same as above.
7-9		22	0.7		Same as above.
9-11		20	0.5	S-1 (10-12)	Well sorted sub-angular large-grained brown to reddish-brown sand (SW).
11-13		14	0.9		Same as above.
13-15		18	0.5		Same as above.
15-17		24	0.1	S-1 (16-17)	Same as above to 17'. Refusal at 17'; hard dry white caliche.

COMMENTS:
Borehole S-1 plugged on 5/22/01 using dry bentonite pellets, filled to grade.

BORING #:	S-2	ENVIRON BORING LOG
DATE:	5/21/01	
START TIME:	11:00	
LOGGED BY:	Doug Errett (ENVIRON)	
DRILLING CO:	VIRONEX	
DRILLER:	Bruce Ashmore	
RIG:	Geoprobe 66 DT	
SAMPLING METHOD:	2-foot continuous stainless steel soil core	
BORING DIA:	2-inch internal diameter	
BORING DEPTH	20'	
ORGANIC VAPOR EQUIPMENT	MiniRAE 2000 Photoionization Detector	PROJECT: Henderson, NV
		CASE # 01-2131F
		COMMENTS: Future "A" street alignment, sampling location 2.

DEPTH (feet)	BLOW COUNTS	RECOVERY (inches)	ORGANIC VAPORS (ppm)	SAMPLE(S) DESIGNATION	DESCRIPTION
0-2	N/A	24	0.9	S-2 (0-1)	Light brown silty fine sand, well sorted (SW-SM).
2-4		22	0.8		Light tan to light brown medium- and fine-grained silty sand with occasional gravel to ¼-inch diameter, poorly sorted and sub-angular (SP-SM).
4-6		24	0.8		Same as above.
6-8		20	0.9		Same as above, slightly increasing gravel content.
8-10		18	0.7		Same as above.
10-12		20	0.8	S-2 (10-12)	Brown and reddish brown sandy gravel, gravel to ¼" diameter (GP).
12-14		18	0.7		Sandy gravel, sub-rounded and poorly sorted, light brown, tan, and reddish brown (GP).
14-16		16	0.5		Fine- to medium-grained sub-angular sand with gravel, brown to reddish brown (SP).
16-18		22	0.7		Same as above.
18-20		20	0.7	S-2 (18-20)	Calcified gravelly sand, poorly sorted and sub-angular, gravel to ¼" diameter, WET at bottom of core (20') (SP).

COMMENTS:
 ehole S-2 plugged on 5/22/01 using dry bentonite pellets, filled to grade.