APPENDIX B

PERCOLATION TEST REPORT

DATED FEBRUARY 12, 2009

PERCOLATION TEST REPORT
Perris Valley Big League Dreams Sports Park
NWC of Mapes Road and Trumble Road
City of Perris, Riverside County, California

February 12, 2009

Converse Project No. 07-81-368-02

Converse Consultants

Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

February 12, 2009

Mr. Robert Echavarria, Principal
MIG
800 North Harbor Drive
Fullerton, CA 92832

Subject: **PERCOLATION TEST REPORT**
Perris Valley Big League Dreams Sports Park
NWC of Mapes Road and Trumble Road
City of Perris, Riverside County, California
Converse Project No. 07-81-368-02

Reference: "Geotechnical Investigation Report, Perris Valley Big League Dreams Sports Park, NWC of Mapes Road and Trumble Road, City of Perris, Riverside County, California" Converse Project No. 07-81-368-01, dated October 30, 2008

Dear Mr. Echavarria:

Converse Consultants (Converse) prepared this report to provide percolation test results for the soils within the individual ball field areas and for the proposed storm drain area within the Perris Valley Big League Dream Sports Park. This work was performed in accordance with our supplemental proposal dated January 13, 2009 and your Professional Services Supplement authorized on January 30, 2009 to Master Agreement dated February 29, 2008.

If you should have any questions regarding this report, please feel free to contact us at (909) 796-0544.

CONVERSE CONSULTANTS

PROFESSIONAL GEOLOGIST
ROY J. RUSHING
NO. 1080
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Roy J. Rushing, C.E.G.
Senior Geologist

Dist.: 2/Addressee

Enc: Figure No. 1, *Approximate Site Location Map*
Figure No. 2, *Approximate Boring/Percolation Test Location Map*
Appendix A, *Field Exploration*
Appendix B, *Percolation Test Data Sheets*

CJG/RJR/HSQ/mjr

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1.0 INTRODUCTION

This report presents percolation tests results for the Perris Valley Big League Dreams Sports Park. The site is located northeast of the intersection of Mapes and Trumble Road, in Perris, California, as shown in Figure No. 1, *Approximate Site Location Map*. The purpose of these percolation tests, were to estimate the infiltration rates of water through the soils within the proposed ball field areas, as well as the soils within the proposed storm drain over-flow area.

2.0 SITE DESCRIPTION

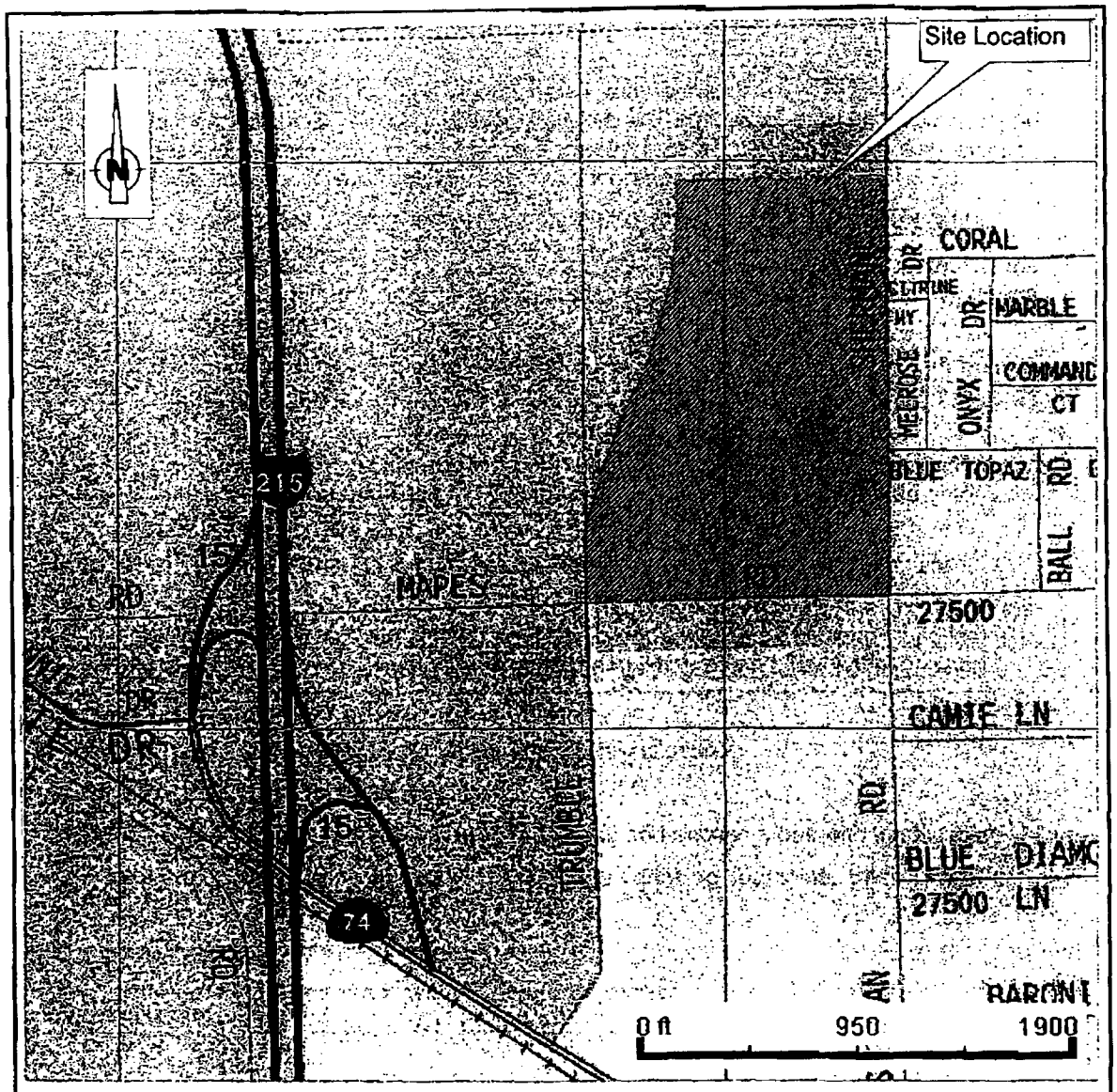
The roughly rectangular shaped site is bounded by open land then Vista Road in the north, Sherman Road on the east, Mapes Road on the south, and Trumble Road on the west. Topography of the site is uneven, with a larger raised area in the center and eastern portions of the site. The large raised area, consisting of undocumented fill, has an approximate height of six (6) to eight (8) feet above the alluvial area on the west. There is an east-west trending descending slope to the south that separates the thicker fill area (northern two-thirds of stockpile area) in the central part of the site, from the thinner fill (southern one-third of stockpile area) adjacent to Mapes Road. At the time of our field investigation, the site was vacant with a covering of native grasses, weeds and occasional shrubs. Drainage is generally towards the west, south and southwest.

3.0 SCOPE OF WORK

Our scope of work was to conduct percolation tests at ten (10) locations selected by MIG. Percolation testing was done in general accordance with the current requirements of the County of Riverside Department of Public Health.

3.1 Field Exploration

Ten (10) borings were drilled on February 3, 2009; using a truck-mounted rig (CME-75) equipped with 8-inch diameter hollow stem augers. The approximate locations of the boring/percolation test locations are shown on Figure No. 2, *Approximate Boring/Percolation Test Location Map*. Borings B-1, B-2, B-4 through B-7, and B-9 and B-10 were drilled to a depth of five (5) feet below existing ground surface (bgs). Borings B-3 and B-8 were drilled to a depth of twenty (20) feet bgs. In all ten (10) borings, a 2-inch diameter slotted pipe was installed in the hollow stem augers prior to removal of the augers. Upon removal of the augers a 3/4-inch diameter gravel pack was installed around the pipe. A geologist visually logged the subsurface conditions encountered in the borings. The logs of the borings are presented in Appendix A, *Field Exploration*.



Source: Thomas Guide, 2008, page 808.

APPROXIMATE SITE LOCATION MAP

PERRIS VALLEY BIG LEAGUE DREAMS SPORTS PARK

City of Perris, Riverside County, California

For: MIG

Job Number:

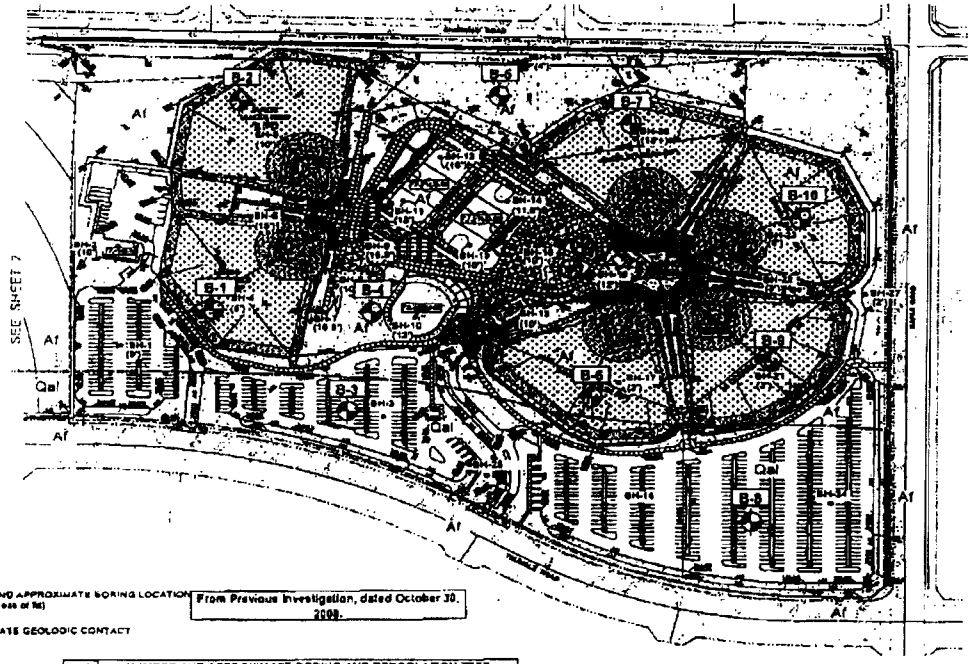
Project Number:

07-81-368-02

Figure No.:

1

Converse Consultants



EXPLANATION

Symbols

- BH-37 (10') — NUMBER AND APPROXIMATE BORING LOCATION (Thickness of fill)
- APPROXIMATE GEOLOGIC CONTACT

Units

- Af — FILL
- Qal — ALLUVIUM

From Previous Investigation, dated October 30, 2006.

B-2 — NUMBER AND APPROXIMATE BORING AND PERCOLATION TEST LOCATION

DESIGN DEVELOPMENT
PRELIMINARY GRADING PLAN

PERRIS VALLEY
BIG LEAGUE DREAMS
COUNTY OF RIVERSIDE
ECONOMIC DEVELOPMENT AGENCY

APPROXIMATE BORING/PERCOLATION TEST LOCATION MAP

PERRIS VALLEY BIG LEAGUE DREAMS SPORTS PARK

City of Perris, Riverside County, California

For: MIG

Project Number: 07-81-368-02

Date: Feb-09

Figure No: 2

Converse Consultants

3.2 Percolation Testing

Percolation testing was conducted in borings (B-1 through B-5) on February 4, 2009 and in borings (B-6 through B-10) on February 5, 2009. The continuous (falling-head) test procedure was utilized for percolation testing, as outlined in the "Waste Disposal for Individual Homes, Commercial and Industrial, County of Riverside, Department of Public Health," dated 1989. Each bore hole tested was filled with water and allowed to presoak prior to testing. The percolation procedure is provided in Appendix A, *Field Exploration*.

The perforated pipe and gravel pack were not removed upon completion of percolation testing. During grading for the Sports Park, the slotted pipe should be removed by the contractor and the resulting voids can then be filled with sand or pea gravel.

3.3 Report Preparation

Data obtained from the field exploration and the percolation testing was evaluated, and this report was prepared to present our findings.

4.0 SITE CONDITIONS AND GROUNDWATER

A general description of the site, including subsurface conditions and presence of groundwater encountered during our field exploration, are presented in the following subsections.

4.1 Subsurface Profile

Both artificial fill and alluvial soils underlie the site as shown in the logs of borings included in Appendix A, *Field Exploration*. In borings B-1, B-2, B-4 through B-7, B-9 and B-10, artificial fill soils consisting primarily of silty sands were encountered to at least five (5) feet in depth. In borings B-3 and B-8, alluvial soils consisting of silty sands were encountered to a depth of twenty (20) feet bgs.

For detailed subsurface profiles at the location of the borings, see the logs of borings (B-1 through B-10), presented in Appendix A, *Field Exploration*.

4.2 *Groundwater*

Groundwater was not encountered in any of our borings drilled on February 3, 2009.

As discussed in the geotechnical report groundwater was not encountered in any of the borings at the time of drilling for the investigation to the maximum depth explored of 51.5 feet bgs. Based on available information, groundwater levels measured between

February and May 2008, ranged from about 45 to 80 feet bgs. These levels are expected to fluctuate due to infiltration from the EMWD ponds. It should be noted that the fluctuations in the groundwater level could also occur due to change in seasons, variations in rainfall, and other factors.

5.0 FINDINGS

The results of the percolation tests are presented in the following table.

Table No. 1, Percolation Test Results

B-1	0-5	0.3
B-2	0-5	0.3
B-3	0-20	0.3
B-4	0-5	1.2
B-5	0-5	0.5
B-6	0-5	0.3
B-7	0-5	0.3
B-8	0-20	0.5
B-9	0-5	0.4
B-10	0-5	0.3

6.0 CLOSURE

The findings of this report were prepared in accordance with generally accepted professional engineering and engineering geologic principles and practice within our profession at this time in Southern California.

Subsurface conditions may differ in some locations from those encountered in the explorations. This report was written for MIG, and its design team only for the proposed project described herein. We are not responsible for technical interpretations made by others, or exploratory information that has not been described or documented in this report. Specific questions or interpretations concerning our findings may require written clarification.

APPENDIX A

FIELD EXPLORATION

APPENDIX A

FIELD EXPLORATION

Our field investigation included a subsurface exploration program consisting of drilling borings and conducting percolation tests. Descriptions of the field exploration and percolation testing program are presented below:

Exploratory Borings

Ten (10) borings were drilled and prepared for percolation testing on February 3, 2009. Borings B-1, B-2, B-4 through B-7, B-9 and B-10 were drilled to a depth of five (5) feet below ground surface (bgs). Borings B-3 and B-8 were drilled to a depth of twenty (20) feet bgs. All of the borings were drilled using a CME-75, equipped with an 8-inch diameter hollow stem augers. Material encountered in the borings was logged by a Converse geologist and classified in the field by visual examination in accordance with the Unified Soil Classification System (ASTM 2488).

For a key to soil symbols and terminology used in the boring logs, refer to Drawing No. A-1, *Unified Soil Classification and Key to Boring Log Symbols*. For logs of the borings, see Drawing Nos. A-2 through A-11, *Logs of Borings.*

Percolation Tests

Percolation testing was conducted in borings (B-1 through B-5) on February 4, 2009 and in borings (B-6 through B-10) on February 5, 2009. The continuous (falling-head) test procedure was utilized for percolation testing, as outlined in the "Waste Disposal for Individual Homes, Commercial and Industrial, County of Riverside, Department of Public Health," dated 1989.

Each bore hole tested was filled with water and allowed to presoak prior to testing.

During testing, the water level in the test holes were filled to varying depths and allowed to drain. When an approximate time interval of about thirty (30) minutes passed, a depth measurement was performed and logged. Following each reading, the test hole was refilled to approximately the same depth as the initial water level. This method was repeated a minimum of ten (10) times for each percolation test hole. The last two (2) readings were made without adding water to the hole. The drop in water level was recorded to the nearest 1/100th inch.

The "Q" rate in gallons per square foot per day was calculated for each test. The slowest (the most conservative) rate for each test location was chosen. Calculation of Q was made using a spreadsheet based upon the appropriate equation in the County guidelines. Data sheets are presented in Appendix B, *Percolation Test Data* Sheets.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

BORING LOG SYMBOLS

SAMPLE TYPE

- STANDARD PENETRATION TEST — Split barrel sampler in accordance with ASTM D-1586-84 Standard Test Method
- DRIVE SAMPLE 2.42" I.D. sampler
- DRIVE SAMPLE No recovery
- BULK SAMPLE
- GROUNDWATER WHILE DRILLING
- GROUNDWATER AFTER DRILLING

LABORATORY TESTING ABBREVIATIONS

TEST TYPE
(Results shown in Appendix B)

CLASSIFICATION

Plasticity	pl
Grain Size Analysis	ma
Passing No. 200 Sieve	wa
Sand Equivalent	se
Expansion Index	ei
Compaction Curve	max
Hydrometer	h

STRENGTH

Pocket Penetrometer	p
Direct Shear	ds
Direct Shear (single point)	ds*
Unconfined Compression	uc
Triaxial Compression	tx
Vane Shear	vs
Consolidation	c
Collapse Test	col
Resistance (R) Value	r
Chemical Analysis	ca
Electrical Resistivity	er

UNIFIED SOIL CLASSIFICATION AND KEY TO BORING LOG SYMBOLS

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Perris Valley Big League Dreams Sports Park
Perris, California
For: MIG

Project No. 07-81-368-02

Drawing No. A - 1

Project ID: 07-81-368-02.GPJ; Template: KEY

Log of Boring No. B - 1

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1430 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ARTIFICIAL FILL (Af): **SILTY SAND (SM):** fine- to coarse-grained, brown.						
5		End of boring at 5.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

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Perris Valley Big League Dreams Sports Park
Perris, California
For: MIG

Project No. 07-81-368-02 Drawing No. A - 2

Log of Boring No. B - 2

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1433 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ARTIFICIAL FILL (Af): **SILTY SAND (SM):** fine- to coarse-grained, brown.						
5		End of boring at 5.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

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Perris Valley Big League Dreams Sports Park
Perris, California
For: MIG

Project No. 07-81-368-02 Drawing No. A - 3

Log of Boring No. B - 3

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1417 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ALLUVIUM (Qal): **SILTY SAND (SM):** fine- to coarse-grained, brown.						
5								
10								
15		trace to little clay						
20		End of boring at 20.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

Converse Consultants

Perris Valley Big League Dreams Sports Park
Perris, California
For MIG

Project No. 07-81-368-02 Drawing No. A - 4

Log of Boring No. B - 4

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1428 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ARTIFICIAL FILL (Af): **SILTY SAND (SM):** fine- to coarse-grained, brown.						
5		End of boring at 5.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

Converse Consultants

Perris Valley Big League Dreams Sports Park
Perris, California
For: MIG

Project No. 07-81-368-02 Drawing No. A - 5

Log of Boring No. B - 5

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1425 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ARTIFICIAL FILL (Af): **SILTY SAND (SM):** fine- to coarse-grained, brown.						
5		End of boring at 5.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

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Perris Valley Big League Dreams Sports Park
Perris, California
For: MIG

Project No 07-81-368-02 Drawing No. A - 6

Log of Boring No. B - 6

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1422 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ARTIFICIAL FILL (Af): **SILTY SAND (SM):** fine- to coarse-grained, brown.						
		ALLUVIUM (Qal): **SILTY SAND (SM):** fine- to coarse-grained, brown.						
5		End of boring at 5.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

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Perris Valley Big League Dreams Sports Park
Perris, California
For: MIG

Project No. 07-81-368-02 Drawing No. A - 7

Log of Boring No. B - 7

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1427 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ARTIFICIAL FILL (Af): **SANDY SILT (ML):** fine- to coarse-grained, brown.						
5		End of boring at 5.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

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Perris Valley Big League Dreams Sports Park
Perris, California
For: MIG

Project No. 07-81-368-02 Drawing No. A - 8

Log of Boring No. B - 8

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1419 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ALLUVIUM (Qal): **SILTY SAND (SM):** fine- to coarse-grained, brown						
5								
10								
15								
20		End of boring at 20.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

Converse Consultants

Perris Valley Big League Dreams Sports Park
Perris, California
For: MIG

Project No 07-81-368-02 Drawing No. A - 9

Log of Boring No. B - 9

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1423 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ARTIFICIAL FILL (Af): **SILTY SAND (SM):** fine- to coarse-grained, brown.						
		ALLUVIUM (Qal): **SILTY SAND (SM):** fine- to coarse-grained, brown.						
5		End of boring at 5.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

Converse Consultants

Perris Valley Big League Dreams Sports Park
Perris, California
For: MIG

Project No 07-81-368-02 Drawing No. A - 10

Log of Boring No. B - 10

Dates Drilled: 2/3/2009 Logged by: CG Checked By: RJR

Equipment: CME 75/ 8" HSA Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 1424 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES DRIVE	SAMPLES BULK	BLOWS/ 6"	MOISTURE (%)	DRY UNIT WT. (pcf)	OTHER
		ARTIFICIAL FILL (Af): SILTY SAND (SM): fine- to coarse-grained, brown.						
5		End of boring at 5.0 feet. No groundwater encountered. Perforated pipe and gravel pack installed for percolation test.						

Converse Consultants

Perris Valley Big League Dreams Sports Park
Perris, California
For. MIG

Project No 07-81-368-02 Drawing No. A - 11

APPENDIX B

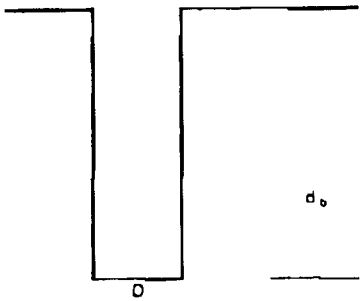
PERCOLATION TEST DATA SHEETS

Percolation Testing

Boring No. B-1

Job Name:	Perris Valley Big League Dreams Sports Park	Depth of Boring (d_b):	5.0	feet
Job No..	07-81-388-02	Diameter of Boring (D):	0.67	feet
Location:	City of Perris / Riverside County	Technician:	CG	
Test Date:	February 4, 2009	Concerns/Issues:	None	

Time of Testing			Depth to Water Level					Q
Initial Time	Final Time	Time Interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	
T_i	T_f	ΔT (hr)	d_b (feet)	d_i (feet)	d_f (feet)	$F = d_f - d_i = \Delta d$ (feet)	L_{ave} (feet)	$(F\ D\ 9) / (L_{ave}\ \Delta T)$ g/sf/d
Presoak	2/4/2009	8:33 AM						
Percolation Test								
8:51 AM	9:21 AM	0.50	4.9	0.00	0.40	0.40	4.70	1.02
9:21 AM	9:51 AM	0.50	4.9	0.00	0.40	0.40	4.70	1.02
9:51 AM	10:21 AM	0.50	4.9	0.00	0.50	0.50	4.65	1.29
10:22 AM	10:51 AM	0.48	4.9	0.00	0.40	0.40	4.70	1.06
10:51 AM	11:21 AM	0.50	4.9	0.00	0.40	0.40	4.70	1.02
11:21 AM	11:50 AM	0.48	4.9	0.00	0.40	0.40	4.70	1.06
11:50 AM	12:19 PM	0.48	4.9	0.00	0.50	0.50	4.65	1.33
12:19 PM	12:48 PM	0.48	4.9	0.00	0.50	0.50	4.65	1.33
12:48 PM	1:17 PM	0.47	4.9	0.00	0.40	0.40	4.70	1.09
1:17 PM	1:46 PM	0.48	4.9	0.00	0.40	0.40	4.70	1.06
1:46 PM	2:18 PM	0.50	4.9	0.50	0.80	0.30	4.25	0.85
2:18 PM	2:44 PM	0.47	4.9	0.90	1.00	0.10	3.95	0.33



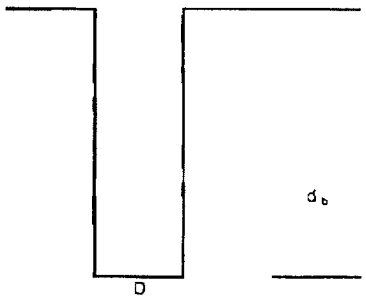
Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

Most Conservative Q (g/sf/d)= 0.3

Percolation Testing

Boring No. B-2

Job Name:	Perris Valley Big League Dreams Sports Park	Depth of Boring (d_b):	5.0	feet
Job No.:	07-81-368-02	Diameter of Boring (D):	0.67	feet
Location:	City of Perris / Riverside County	Technician:	CG	
Test Date:	February 4, 2009	Concerns/Issues:	None	



Time of Testing			Depth to Water Level					Q
Initial Time	Final Time	Time Interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	
T_i	T_f	ΔT	d_b	d_i	d_f	$F = d_f - d_i = \Delta d$	L_{ave}	$(F\ D\ 9) / (L_{ave}\ \Delta T)$
		(hr)	(feet)	(feet)	(feet)	(feet)	(feet)	g/sf/d
Presoak	2/4/2009	8:45 AM						
Percolation Test								
9:02 AM	9:31 AM	0.48	5.0	0.00	0.70	0.70	4.65	1.87
9:31 AM	10:00 AM	0.48	5.0	0.00	0.60	0.60	4.70	1.58
10:00 AM	10:31 AM	0.52	5.0	0.00	0.60	0.60	4.70	1.48
10:31 AM	11:00 AM	0.48	5.0	0.00	0.50	0.50	4.75	1.31
11:00 AM	11:30 AM	0.50	5.0	0.00	0.50	0.50	4.75	1.26
11:30 AM	11:58 AM	0.47	5.0	0.00	0.50	0.50	4.75	1.35
11:58 AM	12:28 PM	0.50	5.0	0.00	0.50	0.60	4.75	1.26
12:28 PM	12:58 PM	0.50	5.0	0.00	0.50	0.50	4.75	1.26
12:58 PM	1:27 PM	0.48	5.0	0.00	0.50	0.50	4.75	1.31
1:27 PM	1:55 PM	0.47	4.9	0.00	0.50	0.50	4.65	1.38
1:55 PM	2:24 PM	0.48	4.9	0.50	0.60	0.10	4.35	0.29
2:24 PM	2:52 PM	0.47	4.9	0.60	0.80	0.20	4.20	0.61

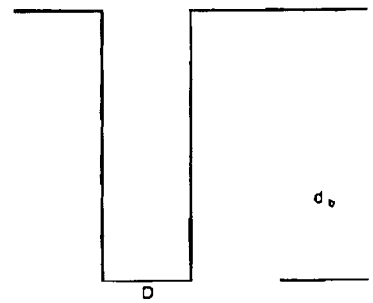
Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

Most Conservative Q (g/sf/d)= 0.3

Percolation Testing

Boring No. B-3

Job Name:	Perris Valley Big League Dreams Sports Park	Depth of Boring (d_b):	20.0	feet
Job No.:	07-81-368-02	Diameter of Boring (D):	0.67	feet
Location:	City of Perris / Riverside County	Technician:	CG	
Test Date:	February 4, 2009	Concerns/Issues:	None	



Time of Testing			Depth to Water Level					Q
Initial Time	Final Time	Time Interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	
T_i	T_f	ΔT	d_b	d_i	d_f	$F = d_f - d_i = \Delta d$	L_{ave}	$(F\ D\ 9) / (L_{ave} * T)$
		(hr)	(feet)	(feet)	(feet)	(feet)	(feet)	g/sf/d
Presoak	2/4/2009	8:36 AM						
Percolation Test								
8:55 AM	9:24 AM	0.48	18.9	0.00	1.30	1.30	18.25	0.88
9:24 AM	9:53 AM	0.48	18.9	0.00	1.00	1.00	18.40	0.67
9:53 AM	10:24 AM	0.52	18.9	0.00	1.00	1.00	18.40	0.63
10:24 AM	10:53 AM	0.48	18.9	0.00	0.90	0.90	18.45	0.61
10:54 AM	11:23 AM	0.48	18.9	0.00	0.80	0.80	18.50	0.54
11:23 AM	11:52 AM	0.48	18.9	0.00	0.80	0.80	18.50	0.54
11:52 AM	12:21 PM	0.48	18.9	0.00	0.80	0.80	18.50	0.54
12:21 PM	12:51 PM	0.50	18.8	0.00	0.80	0.80	18.40	0.52
12:51 PM	1:20 PM	0.48	18.8	0.00	0.70	0.70	18.45	0.47
1:20 PM	1:49 PM	0.48	18.8	0.00	0.80	0.80	18.40	0.54
1:49 PM	2:18 PM	0.48	18.8	0.80	1.20	0.40	17.80	0.28
2:18 PM	2:47 PM	0.48	18.8	1.20	1.70	0.50	17.35	0.36

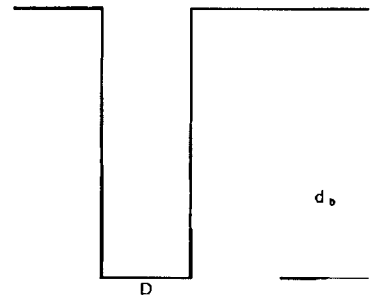
Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

Most Conservative Q (g/sf/d)= 0.3

Percolation Testing

Boring No. B-4

Job Name:	Perris Valley Big League Dreams Sports Park	Depth of Boring (d_b):	5.0	feet
Job No..	07-81-368-02	Diameter of Boring (D):	0.67	feet
Location:	City of Perris / Riverside County	Technician:	CG	
Test Date:	February 4, 2009	Concerns/Issues:	None	



Time of Testing			Depth to Water Level					
Initial Time	Final Time	Time interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	Q
T_i	T_f	ΔT	d_b	d_i	d_f	$F = d_f - d_i = \Delta d$	L_{ave}	$(F\ D\ 9) / (L_{ave}\ \Delta T)$
		(hr)	(feet)	(feet)	(feet)	(feet)	(feet)	g/sf/d
Presoak	2/4/2009	8:45 AM						
Percolation Test								
8:57 AM	9:26 AM	0.48	5.0	0.00	0.50	0.50	4.75	1.31
9:26 AM	9:55 AM	0.48	5.0	0.00	0.50	0.50	4.75	1.31
9:55 AM	10:26 AM	0.52	5.0	0.00	0.50	0.50	4.75	1.22
10:26 AM	10:56 AM	0.50	5.0	0.00	0.50	0.50	4.75	1.26
10:56 AM	11:25 AM	0.48	4.9	0.00	0.50	0.50	4.65	1.33
11:25 AM	11:54 AM	0.48	4.9	0.00	0.50	0.50	4.65	1.33
11:54 AM	12:23 PM	0.48	4.9	0.00	0.50	0.50	4.65	1.33
12:23 PM	12:53 PM	0.50	4.9	0.00	0.50	0.50	4.65	1.29
12:53 PM	1:21 PM	0.47	4.9	0.00	0.50	0.50	4.65	1.38
1:21 PM	1:51 PM	0.50	4.9	0.00	0.50	0.50	4.85	1.29
1:51 PM	2:19 PM	0.47	4.9	0.40	1.20	0.80	4.10	2.51
2:19 PM	2:48 PM	0.48	4.9	0.80	1.70	0.90	3.65	3.06

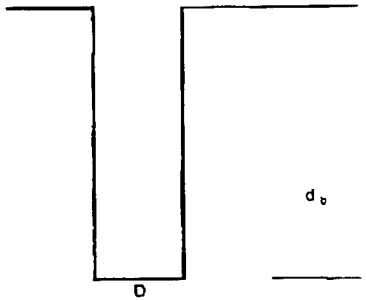
Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

Most Conservative Q (g/sf/d)= 1.2

Percolation Testing

Boring No. B-5

Job Name:	Perris Valley Big League Dreams Sports Park	Depth of Boring (d_b):	5.0	feet
Job No.:	07-81-368-02	Diameter of Boring (D):	0.67	feet
Location:	City of Perris / Riverside County	Technician:	CG	
Test Date:	February 4, 2009	Concerns/Issues:	None	



Time of Testing			Depth to Water Level					Q
Initial Time	Final Time	Time Interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	
T_i	T_f	ΔT (hr)	d_b (feet)	d_i (feet)	d_f (feet)	$F = d_i - d_f = \Delta d$ (feet)	L_{ave} (feet)	$(F D 9) / (L_{ave} \Delta T)$ g/sf/d
Presoak	2/4/2009	8:42 AM						
Percolation Test								
9:00 AM	9:29 AM	0.48	4.9	0.00	0.30	0.30	4.75	0.78
9:29 AM	9:58 AM	0.48	4.9	0.00	0.30	0.30	4.75	0.78
9:58 AM	10:29 AM	0.52	4.9	0.00	0.30	0.30	4.75	0.73
10:29 AM	10:58 AM	0.48	4.9	0.00	0.30	0.30	4.75	0.78
10:58 AM	11:27 AM	0.48	4.9	0.00	0.30	0.30	4.75	0.78
11:27 AM	11:56 AM	0.48	4.9	0.00	0.30	0.30	4.75	0.78
11:56 AM	12:25 PM	0.48	4.9	0.00	0.30	0.30	4.75	0.78
12:26 PM	12:56 PM	0.50	4.9	0.00	0.30	0.30	4.75	0.76
12:56 PM	1:25 PM	0.48	4.9	0.00	0.30	0.30	4.75	0.78
1:25 PM	1:53 PM	0.47	4.9	0.00	0.20	0.20	4.80	0.54
1:53 PM	2:21 PM	0.47	4.9	0.20	0.40	0.20	4.60	0.56
2:21 PM	2:50 PM	0.48	4.9	0.40	0.60	0.40	4.30	1.15

Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

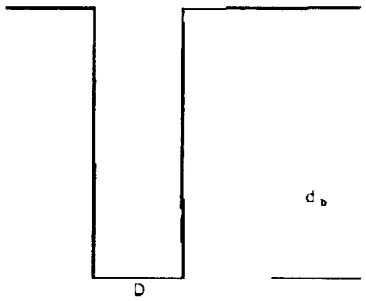
Most Conservative Q (g/sf/d)=	0.5

Percolation Testing

Boring No. B-6

Job Name: Perris Valley Big League Dreams Sports Park
Job No.: 07-81-368-02
Location: City of Perris / Riverside County
Test Date: February 5, 2009

Depth of Boring (d_b): 5.0 feet
Diameter of Boring (D): 0.67 feet
Technician: CG
Concerns/Issues: None



Time of Testing			Depth to Water Level					
Initial Time	Final Time	Time Interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	Q
T_i	T_f	ΔT (hr)	d_b (feet)	d_i (feet)	d_f (feet)	$F = d_i - d_f = \Delta d$ (feet)	L_{ave} (feet)	$(F\ D\ 9) / (L_{ave}\ \Delta T)$ g/sf/d
Presoak	2/5/2009	8:06 AM						
Percolation Test								
8:22 AM	8:52 AM	0.50	4.7	0.00	0.20	0.20	4.60	0.52
8:53 AM	9:22 AM	0.48	4.7	0.00	0.20	0.20	4.60	0.54
9:22 AM	9:52 AM	0.50	4.6	0.00	0.20	0.20	4.50	0.53
9:52 AM	10:22 AM	0.50	4.6	0.00	0.20	0.20	4.50	0.53
10:22 AM	10:52 AM	0.50	4.5	0.00	0.10	0.10	4.45	0.27
10:52 AM	11:21 AM	0.48	4.5	0.00	0.10	0.10	4.45	0.28
11:21 AM	11:51 AM	0.50	4.5	0.00	0.10	0.10	4.45	0.27
11:52 AM	12:20 PM	0.47	4.5	0.00	0.10	0.10	4.45	0.29
12:20 PM	12:50 PM	0.50	4.5	0.10	0.20	0.10	4.35	0.28
12:50 PM	1:19 PM	0.48	4.5	0.00	0.10	0.10	4.45	0.28
1:19 PM	1:48 PM	0.48	4.5	0.10	0.20	0.10	4.35	0.29
1:48 PM	2:14 PM	0.43	4.5	0.20	0.30	0.10	4.25	0.33

Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

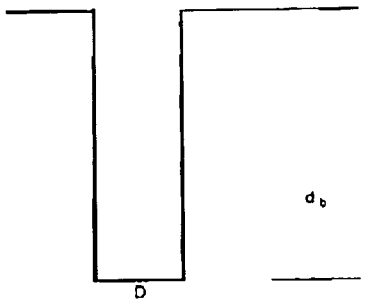
Most Conservative Q (g/sf/d)= 0.3

Percolation Testing

Boring No. B-7

Job Name: Perris Valley Big League Dreams Sports Park
Job No.: 07-81-368-02
Location: City of Perris / Riverside County
Test Date: February 5, 2009

Depth of Boring (d_b): 5.0 feet
Diameter of Boring (D): 0.67 feet
Technician: CG
Concerns/Issues: None



Time of Testing			Depth to Water Level					Q
Initial Time	Final Time	Time Interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	
T_i	T_f	ΔT (hr)	d_b (feet)	d_i (feet)	d_f (feet)	$F = d_f - d_i = \Delta d$ (feet)	L_{ave} (feet)	$(F\ D\ 9) / (L_{ave}\ \Delta T)$ g/sf/d
Presoak	2/5/2009	8:07 AM						
Percolation Test								
8:20 AM	8:50 AM	0.50	4.7	0.00	0.40	0.40	4.50	1.07
8:50 AM	9:20 AM	0.50	4.7	0.00	0.40	0.40	4.50	1.07
9:20 AM	9:49 AM	0.48	4.7	0.00	0.40	0.40	4.50	1.10
9:50 AM	10:20 AM	0.50	4.6	0.00	0.30	0.30	4.45	0.81
10:20 AM	10:49 AM	0.48	4.6	0.00	0.30	0.30	4.45	0.84
10:49 AM	11:19 AM	0.50	4.6	0.00	0.30	0.30	4.45	0.81
11:19 AM	11:49 AM	0.50	4.6	0.00	0.30	0.30	4.45	0.81
11:49 AM	12:18 PM	0.48	4.6	0.00	0.30	0.30	4.45	0.84
12:18 PM	12:49 PM	0.52	4.6	0.00	0.30	0.30	4.45	0.78
12:49 PM	1:18 PM	0.48	4.6	0.00	0.20	0.20	4.50	0.55
1:18 PM	1:47 PM	0.48	4.6	0.20	0.40	0.20	4.30	0.58
1:47 PM	2:12 PM	0.42	4.6	0.40	0.50	0.10	4.15	0.35

Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

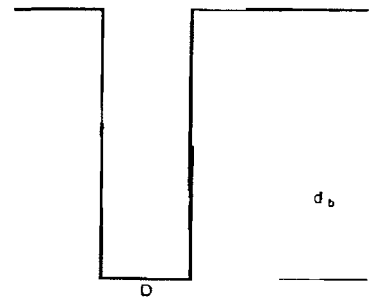
Most Conservative Q (g/sf/d)= 0.3

Percolation Testing

Boring No. B-8

Job Name: Perris Valley Big League Dreams Sports Park
Job No.: 07-81-368-02
Location: City of Perris / Riverside County
Test Date: February 5, 2009

Depth of Boring (d_b): 20.0 feet
Diameter of Boring (D): 0.67 feet
Technician: CG
Concerns/Issues: None



Time of Testing			Depth to Water Level					Q
Initial Time	Final Time	Time Interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	
T_i	T_f	ΔT	d_b	d_i	d_f	$F = d_f - d_i = \Delta d$	L_{ave}	$(F\ D\ 9) / (L_{ave}\ \Delta T)$
		(hr)	(feet)	(feet)	(feet)	(feet)	(feet)	g/sf/d
Presoak	2/5/2009	8:00 AM						
Percolation Test								
8:15 AM	8:45 AM	0.50	18.7	0.00	0.90	0.90	18.25	0.59
8:45 AM	9:14 AM	0.48	18.7	0.00	0.80	0.80	18.30	0.54
9:14 AM	9:43 AM	0.48	18.7	0.00	0.80	0.80	18.30	0.54
9:44 AM	10:14 AM	0.50	18.7	0.00	0.80	0.80	18.30	0.52
10:14 AM	10:44 AM	0.50	18.7	0.00	0.80	0.80	18.30	0.52
10:44 AM	11:14 AM	0.50	18.6	0.00	0.80	0.80	18.20	0.53
11:14 AM	11:43 AM	0.48	18.6	0.00	0.80	0.80	18.20	0.55
11:43 AM	12:13 PM	0.50	18.6	0.00	0.80	0.80	18.20	0.53
12:13 PM	12:43 PM	0.50	18.5	0.00	0.80	0.80	18.10	0.53
12:43 PM	1:13 PM	0.50	18.5	0.00	0.80	0.80	18.10	0.53
1:13 PM	1:43 PM	0.50	18.5	0.80	4.60	3.80	15.80	2.89
1:43 PM	2:09 PM	0.43	18.5	4.60	6.90	2.30	12.75	2.50

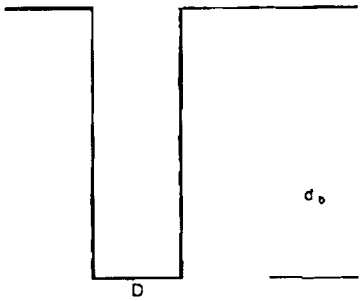
Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

Most Conservative Q (g/sf/d)= 0.5

Percolation Testing

Boring No. B-9

Job Name:	Perris Valley Big League Dreams Sports Park	Depth of Boring (d_b):	5.0	feet
Job No..	07-81-368-02	Diameter of Boring (D):	0.67	feet
Location:	City of Perris / Riverside County	Technician:	CG	
Test Date:	February 5, 2009	Concerns/Issues:	None	



Time of Testing			Depth to Water Level					Q
Initial Time	Final Time	Time Interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	
T_i	T_f	ΔT (hr)	d_b (feet)	d_i (feet)	d_f (feet)	$F = d_i - d_f = \Delta d$ (feet)	L_{ave} (feet)	$(F\ D\ 9) / (L_{ave}\ \Delta T)$ g/sf/d
Presoak	2/5/2009	8:07 AM						
Percolation Test								
8:17 AM	8:47 AM	0.50	4.4	0.00	0.30	0.30	4.25	0.85
8:47 AM	9:16 AM	0.48	4.4	0.00	0.30	0.30	4.25	0.88
9:17 AM	9:46 AM	0.48	4.4	0.00	0.30	0.30	4.25	0.88
9:47 AM	10:17 AM	0.50	4.4	0.00	0.30	0.30	4.25	0.85
10:17 AM	10:46 AM	0.48	4.4	0.00	0.30	0.30	4.25	0.88
10:46 AM	11:15 AM	0.48	4.4	0.00	0.30	0.30	4.25	0.88
11:15 AM	11:45 AM	0.50	4.4	0.00	0.30	0.30	4.25	0.85
11:45 AM	12:15 PM	0.50	4.4	0.00	0.30	0.30	4.25	0.85
12:15 PM	12:45 PM	0.50	4.4	0.00	0.30	0.30	4.25	0.85
12:45 PM	1:15 PM	0.50	4.4	0.00	0.20	0.20	4.30	0.56
1:15 PM	1:45 PM	0.50	4.4	0.20	0.40	0.20	4.10	0.59
1:45 PM	2:10 PM	0.42	4.4	0.40	0.50	0.10	3.95	0.36

Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

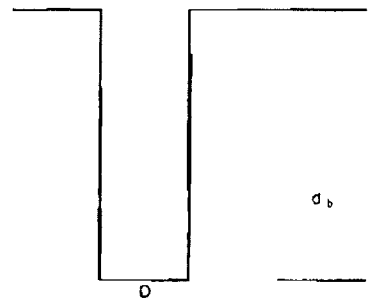
Most Conservative Q (g/sf/d)= 0.4

Percolation Testing

Boring No. B-10

Job Name:	Perris Valley Big League Dreams Sports Park	Depth of Boring (d_b):	5.0 feet
Job No.:	07-81-388-02	Diameter of Boring (D):	0.67 feet
Location:	City of Perris / Riverside County	Technician:	CG
Test Date:	February 5, 2009	Concerns/Issues:	None

Time of Testing			Depth to Water Level					Q
Initial Time	Final Time	Time Interval	Depth to Bottom	Initial Height	Final Height	Drop in Height	Average length of water column	
T_i	T_f	ΔT (hr)	d_b (feet)	d_i (feet)	d_f (feet)	$F = d_f - d_i = \Delta d$ (feet)	L_{ave} (feet)	$(F\ D\ 9) / (L_{ave}\ \Delta T)$ g/sf/d
Presoak	2/5/2009	8:10 AM						
Percolation Test								
8:19 AM	8:49 AM	0.50	4.9	0.00	0.30	0.30	4.75	0.76
8:49 AM	9:18 AM	0.48	4.9	0.00	0.40	0.40	4.70	1.06
9:18 AM	9:48 AM	0.50	4.9	0.00	0.30	0.30	4.75	0.76
9:48 AM	10:18 AM	0.50	4.9	0.00	0.40	0.40	4.70	1.02
10:18 AM	10:48 AM	0.50	4.9	0.00	0.30	0.30	4.75	0.76
10:48 AM	11:17 AM	0.48	4.9	0.00	0.30	0.30	4.75	0.78
11:17 AM	11:47 AM	0.50	4.9	0.00	0.20	0.20	4.80	0.50
11:47 AM	12:16 PM	0.48	4.9	0.00	0.20	0.20	4.80	0.52
12:16 PM	12:47 PM	0.52	4.9	0.00	0.20	0.20	4.80	0.48
12:47 PM	1:16 PM	0.48	4.9	0.00	0.20	0.20	4.80	0.52
1:16 PM	1:46 PM	0.50	4.9	0.20	0.40	0.20	4.60	0.52
1:46 PM	2:11 PM	0.42	4.9	0.40	0.50	0.10	4.45	0.32



Note: Perforated Pipe and Gravel Pack were not removed upon completion of Percolation Testing

Most Conservative Q (g/sf/d)= 0.3