

**APPENDIX A**

**BORING LOGS AND DEVELOPMENT LOG**

GEOLOGIC LOG		DATE STARTED: 08-Sep-09 DATE COMPLETED: 08-Sep-09	LOGGER: Quin Kinnebrew WEATHER: Clear & Warm	PAGE 1 OF 2 WELL NO. GMW-66				
COMPANY NAME: <b>PARSONS</b> Pasadena, CA		DRILLING SUBCONTRACTOR: Gregg Drilling		SURFACE ELEV. ft amsl TOP CASING ELEV. ft amsl				
PROJECT: DFSP, Norwalk Job Number: 746440 LOCATION: Norwalk, CA		DRILL RIG TYPE: Hollow Stem Auger AUGER TYPE & SIZE: Hollow Stem Auger BOREHOLE DIAMETER: 10 inches		NORTHING: ft EASTING: ft				
DEPTH (ft bgs)	DESCRIPTION OF MATERIALS	GRAPHIC LOG	USCS CODE	PID HEADSPACE (ppmv)	BLOW COUNTS	WELL CONSTR.	WELL CONSTRUCTION INFORMATION	
0	SANDY SILT: Dark grayish brown, fine sandy silt, dry to damp, no odor or visible staining.		ML				SURFACE COMPLETION: Flush Mount	
	Black oily tar, moderate petroleum hydrocarbon odor.						WELL CASING: Material: SCH 40 PVC Diameter: 4 inches	
	SILTY SAND: Dark grayish brown, silty fine sand, damp, trace petroleum hydrocarbon odor, no visible staining.		SM				WELL SCREEN: Material: SCH 40 PVC Screen Opening: 0.02 inch	
5	SAND: Light olive brown, fine sand with trace silt, moist, friable, no odor or visible staining.		SP	>1200	6, 8, 11		CONSTRUCTION MATERIALS: Sand Pack: 2/16 Monterey Sand Bentonite Seal: Medium Bentonite Chip Grout Seal: Cement/Bentonite (95/5)	
	SAND: Same as above (SAA).		SP				DEPTH INTERVALS: (feet bgs) Casing: 0' - 20' Screen: 20' - 40' Grout Seal: 2' - 14.5' Bentonite Seal: 14.5' - 18' Sand Pack: 18' - 40.5' End Cap: 40' - 40.3'	
10	SAND: Light brownish gray, fine sand, moist, friable, no odor or visible staining.		SP	>390	4, 7, 9			
15	SAND: SAA.		SP	5.8	11, 19, 24			
20	SAND: Gray, fine sand with trace medium to coarse sand, moist, friable, no odor or visible staining.		SP					
	SANDY CLAY: Olive Brown, fine sandy clay to clay,		CL	4.6	6, 17, 21			TD = 40.5 ft bgs

bgs - Below Ground Surface  
ft - feet  
HSA - Hollow Stem Auger  
N/A - Not Applicable  
NS - Not Sampled  
PID - Photoionization Detector  
ppmv - Parts per Million, Volume per Volume  
SAA - Same as Above  
Horizontal Survey System: NAD 1983 State Plane California V-FIPS-0405 Feet  
Elevations: ASP-NAD83-Zone 4-US Feet

USCS CODE DESCRIPTIONS:

CL - Gravelly, sandy, or silty clays	SC - Clayey sands, poorly graded
GC - Gravel/sand/clay mixtures, poorly graded	SM - Silty sands, poorly graded
GM - Gravel/sand/silt mixtures, poorly graded	SP - Sands, poorly graded
GP - Gravel/sand mixtures, poorly graded	SW - Sands, well graded
GW - Gravel/sand mixtures, well graded	
ML - Silty or clayey fine sands	
NACM - Not applicable/consolidated material	
NSNR - No sample/no recovery	

GEOLOGIC LOG		DATE STARTED: 08-Sep-09 DATE COMPLETED: 08-Sep-09		LOGGER: Quin Kinnebrew WEATHER: Clear & Warm			PAGE 2 OF 2 WELL NO. GMW-66	
COMPANY NAME: <b>PARSONS</b> Pasadena, CA		DRILLING SUBCONTRACTOR: Gregg Drilling			SURFACE ELEV. ft amsl TOP CASING ELEV. ft amsl			
PROJECT: DFSP, Norwalk Job Number: 746440 LOCATION: Norwalk, CA		DRILL RIG TYPE: Hollow Stem Auger AUGER TYPE & SIZE: Hollow Stem Auger BOREHOLE DIAMETER: 10 inches			NORTHING: ft EASTING: ft			
DEPTH (ft bgs)	DESCRIPTION OF MATERIALS	GRAPHIC LOG	USCS CODE	PID HEADSPACE (ppmv)	BLOW COUNTS	WELL CONSTR.	WELL CONSTRUCTION INFORMATION	
	moist, no odor or visible staining.							
25	SILT: Dark grayish brown, silt with trace brown iron oxide staining, moist to wet, micaceous, no odor or visible staining.		ML	4.9	5, 7, 11			
	SANDY SILT: Dark gray, fine sandy silt, wet, micaceous, no odor or visible staining.		ML					
30	SAND: Dark gray, fine sand with trace silt, saturated, friable, no odor or visible staining.		SP	9.5	4, 6, 8			
	SAND: SAA.		SP	7.4	7, 9, 14			
40	SILTY SAND: Dark gray, silty fine sand to fine sand with trace silt, saturated, no odor or visible staining.		SM/SP	6.9	8, 11, 17			

bgs - Below Ground Surface  
ft - feet

HSA - Hollow Stem Auger

N/A - Not Applicable

NS - Not Sampled

PID - Photoionization Detector

ppmv - Parts per Million, Volume per Volume

SAA - Same as Above

Horizontal Survey System: NAD 1983 State Plane California V-FIPS-0405 Feet

Elevations: ASP-NAD83-Zone 4-US Feet

USCS CODE DESCRIPTIONS:

CL - Gravelly, sandy, or silty clays

GC - Gravel/sand/clay mixtures, poorly graded

GM - Gravel/sand/silt mixtures, poorly graded

GP - Gravel/sand mixtures, poorly graded

GW - Gravel/sand mixtures, well graded

ML - Silty or clayey fine sands

NACM - Not applicable/consolidated material

NSNR - No sample/no recovery

SC - Clayey sands, poorly graded

SM - Silty sands, poorly graded

SP - Sands, poorly graded

SW - Sands, well graded





Geologist: **Quin Kinnebrew**

Type of Instrument/Serial No. **PID**

Sample Container:  Yes  No

Personal Sampling:  Yes  No

Reviewed By:

Calibration Date/Gas:

Sample Analyses:

Person Sampled:

**Parsons**

**Field Boring Log**

Location of Boring/Well:		Job No. <b>746441.01000</b>	Client/Site <b>DFSP-Norwalk</b>
Drilling Co./Method <b>Direct Push Probe</b>		Boring/Well Number <b>DPT-3</b>	
Sampling Method <b>Acetate-lined sampler</b>		Sheet <b>1 of 1</b>	
Background Conditions <b>Clear &amp; warm</b>		Drilling Start Date <b>09.3.09</b> Finish Date <b>09.3.09</b>	
Surface Conditions <b>Concrete</b>		Time	

Sample No. Sample Depth	Time	Sampler Blows	Inch's Driven Recovery (%)	Instrument: <b>PID</b>			Depth in Feet	USCS Soil Type
				Auger	Sample	Breathing Zone		
							0	
							2	
							4	
<b>DPT-3</b> 5	0921	NA				6.5	6	<b>ml</b> @4' Olive brown fine sandy silt, moist, micaceous, no odor or visible staining (*)
<b>DPT-3</b> 10	0924	NA				6.9	10	<b>sm</b> @8' Olive brown silty fine sand, damp, micaceous, *
							12	
							14	
<b>DPT-3</b> 15	0930	NA		X		9.5	16	<b>sm</b> SAME
							18	
<b>DPT-3</b> 20	0934	NA		X		7.7	20	<b>sm</b> @18' Dark gray silty fine sand, moist to wet, micaceous, apparent staining, very slight petroleum hydrocarbon odor
							22	
							24	
<b>DPT-3</b> 25	0948	NA		X		3.5	26	<b>sw</b> @23' yellowish brown fine to coarse sand, moist, friable, *
							28	
<del><b>DPT-3</b> 30</del>		NA					30	
							32	
							34	
							36	
							38	
							40	
							42	

*Samples scheduled for analysis*

*PID = moisture sensitive*

Geologist: **Quin Kinnebrew**

Type of Instrument/Serial No. **PID**

Sample Container:  Yes  No

Personal Sampling:  Yes  No

Reviewed By:

Calibration Date/Gas:

Sample Analyses:

Person Sampled:

**Parsons**

**Field Boring Log**

Location of Boring/Well:

Job No. **746441.01000**

Client/Site **DFSP-Norwalk**

Drilling Co./Method

Boring/Well Number

**Direct Push Probe**

**DPT-4**

Sampling Method

**Acetate-lined sampler**

Sheet

Background Conditions **clear + warm**

1 of 1

Surface Conditions **concrete**

Drilling

Datum:

Start Date

Finish Date

**09.3.09 09.3.09**

Time

Time

Notes:

Sample No. Sample Depth	Time	Sampler Blows	Instruments Checked for Accuracy	Instrument: <b>PID</b>			Depth in Feet	USCS Soil Type
				Auger	Sample	Breathing Zone		
							0	
							2	
							4	
<b>DPT-4</b> 5	1026	NA	X			2400*	6	
							8	
<b>DPT-4</b> 10	1032	NA	X			90*	10	
							12	
<b>DPT-4</b> 15	1036	NA	X			19.1	14	
							16	
<b>DPT-4</b> 20	1043	NA	X			9000*	18	
							20	
<b>DPT-4</b> 25	1048	NA	X				22	
							24	
<b>DPT-30</b>		NA	X				26	
							28	
							30	
							32	
							34	
							36	
							38	
							40	
							42	

**Concrete** 0.5-4'  
Drillers note that soil hand augered has v. strong odor (solvent + petroleum hydrocarbons)

**ML @4'** olive brown fine sandy silt, damp, no apparent staining, v. strong chemical odor, micaceous

**ML @8'** SAME

**SM @8.5'** Olive brown silty fine sand, moist, micaceous, no apparent staining, strong chemical odor

**SP @13'** Lt. brownish gray fine sand, damp, friable, no apparent staining, trace chemical odor

**SP @18'** SAME

**CL @18.5'** v. dk gray f. sandy to silty clay, wet, apparent staining, TPH odor (different than above)

**ML @23'** Dark gray silt to fine sandy silt, moist, micaceous, apparent staining, strong TPH odor

**SP @25'** Gray fine sand, damp, friable possible staining, strong odor

*PID = moisture sensitive*

*Samples scheduled for analysis*

Geologist: **Quin Kinnebrew**

Type of Instrument/Serial No. **PID**

Sample Container:  Yes  No

Personal Sampling:  Person Sampled:

**Parsons**

**Field Boring Log**

Location of Boring/Well:		Job No. <b>746441.01000</b>		Client/Site <b>DFSP-Norwalk</b>						
Drilling Co./Method		Direct Push Probe		Boring/Well Number <b>DPT-5</b>						
Sampling Method		Acetate-lined sampler		Sheet <b>1 of 1</b>						
Background Conditions <b>clear &amp; warm</b>		Surface Conditions <b>concrete</b>		Drilling						
Datum:		Instrument: <b>PID</b>		Start Date <b>09-3-09</b>						
Sample No.	Time	Sampler Blows	Includes Driven for analysis & Recovery	Auger	Sample	Breathing Zone	Depth in Feet	USCS Soil Type	Notes:	Finish Date
							0			
							2			
<b>DPT-5</b>	<b>5</b>	<b>1150</b>	<b>NA</b>				4	<b>SM/SP</b>	<b>@4' olive brown silty fine sand to fine sand, damp, no odor or visible staining, (*)</b> , friable	
<b>DPT-5</b>	<b>10</b>	<b>1158</b>	<b>NA</b>	<b>X</b>			6	<b>ML</b>	<b>@6' Dark olive brown silty fine sand, moist, micaceous, *</b>	
<b>DPT-5</b>	<b>15</b>	<b>1204</b>	<b>NA</b>	<b>X</b>			8	<b>SP</b>	<b>@13' olive brown fine sand w/ trace silt, moist, friable, *</b>	
<b>DPT-5</b>	<b>20</b>	<b>1209</b>	<b>NA</b>	<b>X</b>			10	<b>CL</b>	<b>@18' Dark gray silty clay, moist, possible staining, slight Petroleum hydrocarbon odor</b>	
<b>DPT-5</b>	<b>25</b>	<b>1215</b>	<b>NA</b>	<b>X</b>			12	<b>CL</b>	<b>@23' SAME</b>	
<b>DPT-5</b>	<b>30</b>	<b>NA</b>					14	<b>SM</b>	<b>@23.5' DK gray, silty fine sand, saturated, apparent staining, moderate pet. hyd. odor</b>	
							16			
							18			
							20			
							22			
							24			
							26			
							28			
							30			
							32			
							34			
							36			
							38			
							40			
							42			

*samples scheduled for analysis 9/23*

*Nm (not measured)*

Notes: **09-3-09 09-3-09**



Parsons

Field Boring Log

Location of Boring/Well:

Job No.  
746441.01000

Client/Site DFSP-Norwalk

Drilling Co./Method

Boring/Well Number

Direct Push Probe

DPT-6

Sampling Method

Acetate-lined sampler

Sheet

Background Conditions

1 of 1

Surface Conditions

clear warm

Start Date

Finish Date

soil

09.4.09 09.4.09

Time Time

Datum:

Sample No. Sample Depth	Time	Sampler Blows	Inches Driven for recovery	Instrument: PID			Depth in Feet	USCS Soil Type
				Auger	Sample	Breathing Zone		
							0	
							2	
							4	
DPT-6 5	0821	NA			2.9		6	SM @4' Olive gray silty fine sand, damp, no odor or visible staining (*)
							8	
DPT-6 10	0824	NA			9.7		10	SP @8' Lt. yellowish brown fine sand, damp, *, friable
							12	
							14	
DPT-6 15	0828	NA			1.6		16	SP @13 Gray fine sand, damp, *, friable
							18	
DPT-6 20	0834	NA	X		9,000*		20	CL @18' DK gray f. sandy clay, moist, apparent staining, moderate pet. hyd. odor
							22	
							24	
							26	
DPT-6 25	0840	NA	X		2,600*		28	ML @18.5' Dark greenish gray fine sandy silt, moist to wet, micaceous, apparent staining, mod. pet. hyd. odor
							30	
							32	
							34	
							36	
							38	
							40	
							42	

Notes:

Geologist: Quin Kinnebrew  
 Reviewed By: \_\_\_\_\_  
 Type of Instrument/Serial No. PID / PG# 7600  
 Calibration Date/Gas: 09.03.09 / H2  
 Sample Container:  Yes  No  
 Personal Sampling:  Yes  No  
 Person Sampled: \_\_\_\_\_

Inches Driven for recovery  
 Sawtooth Schedule  
 #

Geologist: **Quin Kinnebrew**

Type of Instrument/Serial No. **PID**

Sample Container:  Yes  No

Personal Sampling:  Yes  No

Person Sampled:

Parsons

Field Boring Log

Location of Boring/Well:		Job No. <b>746441.01000</b>	Client/Site <b>DFSP-Norwalk</b>
Drilling Co./Method <b>Direct Push Probe</b>		Boring/Well Number <b>DPT-7</b>	
Sampling Method <b>Acetate-lined sampler</b>		Sheet <b>1 of 1</b>	
Background Conditions <b>clear &amp; warm</b>		Drilling <b>1 of 1</b>	
Surface Conditions <b>concrete</b>		Start Date <b>09.26.09</b>	Finish Date <b>09.26.09</b>

Datum:

Sample No.	Time	Sampler Blows	Locks Entered * Recovery	Instrument: <b>PID</b>			Depth in Feet	USCS Soil Type	Notes:
				Auger	Sample	Breathing Zone			
							0		
							2		
							4	SM	@4' Dark <sup>olive</sup> brown to olive brown silty fine sand, moist, no odor or visible staining (*)
DPT-7 5	0713	NA					6		
							8	SP	@8' Grayish brown fine sand, moist, friable, *
DPT-7 10	0717	NA					10		
							12		
							14	SP	@13' Grayish brown fine sand w/ trace m. to coarse sand, damp, friable, *
DPT-7 15	0721	NA	X				16		
							18		
DPT-7 20	0725	NA	X				20	CL	@18' Dark gray fine sandy silty clay w/ trace f. sand, moist to wet, apparent staining, moderate pet. hyd. odor
							22		
							24	ML	@23' Dark greenish gray silt w/ trace f. sand, moist, micaceous, apparent staining, strong pet. hyd. odor
DPT-7 25	0730	NA	X				26		
							28		
DPT-7 30		NA					30		
							32		
							34		
							36		
							38		
							40		
							42		

Samples scheduled for analysis

PID is moisture sensitive

3000+



Geologist: **Quin Kinnebrew**

Type of Instrument/Serial No. **PID**

Sample Container:  No  Yes

Personal Sampling:  Yes  No

Person Sampled: \_\_\_\_\_

Reviewed By: \_\_\_\_\_

Calibration Date/Gas: \_\_\_\_\_

Sample Analyses: \_\_\_\_\_

Parsons

### Field Boring Log

Location of Boring/Well: \_\_\_\_\_

Job No. **746441.01000**

Client/Site **DFSP-Norwalk**

Drilling Co./Method \_\_\_\_\_

Boring/Well Number

**Direct Push Probe**

**DPT-9**

Sampling Method \_\_\_\_\_

Acetate-lined sampler

Sheet

Background Conditions **clear & warm**

**1** of **1**

Surface Conditions **concrete**

Drilling

Datum: \_\_\_\_\_

Start Date	Finish Date
<b>09.4.09</b>	<b>09.4.09</b>
Time	Time

Sample No. Sample Depth	Time	Sampler Blows	Inches Driven * Recovery	Instrument: <b>PID</b>			Depth in Feet	USCS Soil Type	Notes:
				Auger	Sample	Breathing Zone			
							0		
							2		
							4	sm	@4' DK. yel. brown silty f. sand, damp, no odor or visible staining (*)
DPT-9	5 0745	NA					6		
							8		
DPT-9	10 1048	NA					10	sm	@8' Dark olive brown silty f. sand, moist, micaceous, *
							12		
							14		
DPT-9	15 0751	NA					16	SP	@13' Gray f. sand, damp, friable, possible staining, slight pet. hyd. odor
							18		
DPT-9	20 0758	NA					20	SP	@18' SAME; mod. pet. hyd. odor
							22		
							24		
DPT-9	25 0803	NA					26	SP	@23' SAME; " " "
							28		
DPT-9	30	NA					30		
							32		
							34		
							36		
							38		
							40		
							42		

*Sample is sched. for env lab.*

*PID = moisture sensitive*

*1,980\**

*2,700\**

*7,200\**



Parsons

Field Boring Log

Location of Boring/Well:

Job No. 746441.01000

Client/Site DFSP-Norwalk

Drilling Co./Method

Boring/Well Number

Direct Push Probe

DPT-II

Sampling Method

Acetate-lined sampler

Sheet

Background Conditions

Warm & clear

1 of 1

Surface Conditions

Soil

Drilling

Start Date

Finish Date

09-4-09 09-4-09

Time

Time

Datum:

Notes:

Geologist: Quin Kinnebrew

Reviewed By:

Type of Instrument/Serial No. PID / PGM 7600

Calibration Date/Gas: 09-03-09 / Isobutylene

Sample Container:

No

Yes

Personnel Sampling:

Person Sampled:

Sample No. Sample Depth	Time	Sampler Blows	Instrument: PID	Auger			Depth in Feet	USCS Soil Type
				Auger	Sample	Breathing Zone		
							0	
							2	
							4	
DPT-II 5	1042	NA					5	SP
							6	
							8	
DPT-II 10	1046	NA					10	SP
							12	
							14	
DPT-II 15	1051	NA					15	SM
							16	
							18	
DPT-II 20	1056	NA					20	ML
							22	
							24	
DPT-II 25	1105	NA					25	ML
							26	
							28	
							30	
							32	
							34	
							36	
							38	
							40	
							42	

samples scheduled for 2-11-12

SP @ 4' yellowish brown fine sand w/ trace silt, damp, friable, no odor or visible staining (X)

SP @ 9' Lt. brownish gray f-sand damp, no visible staining, slight pet. hyd. odor

SM @ 8' dark yellowish brown silty f-sand, damp, no visible staining, slight pet. hyd. odor

SP @ 13' same as @ 9'

@ 18' SAME

ML @ 18' dark grey f. sandy silt, moist to wet, micaceous, possible staining, moderate pet. hyd. odor

ML @ 23' Same

9000t

399

DPT-11 30

NA

Geologist: **Quin Kinnebrew**

Type of Instrument/Serial No. **PID**

Sample Container:  Yes  No

Yes  No

Personal Sampling:  Yes  No

Reviewed By:

Calibration Date/Gas:

Sample Analyses:

Person Sampled:

# Parsons

# Field Boring Log

Location of Boring/Well:

Job No. **746441.01000**

Client/Site **DFSP-Norwalk**

Drilling Co./Method

**Direct Push Probe**

Sampling Method

**Acetate-lined sampler**

Background Conditions **Clear & Hot**

Boring/Well Number

**DPT-12**

Sheet

**1 of 1**

Surface Conditions

**Asphalt**

Start

Date

Time

Finish

Date

Time

Notes:

**09.14.09 09.14.09**

Datum:

Sample No. Sample Depth	Time	Sampler Blows	In-situ Penetration Resistance % Blowcount	Instrument: <b>PID</b>			Depth in Feet	USCS Soil Type	Notes
				Auger	Sample	Breathing Zone			
							0		
							2		
							4		
<b>DPT-12</b> 5	1214	NA					4.4	<b>SP</b>	@4' yellowish brown fine sand, dry, friable, no odor or visible staining
							6		
							8		
<b>DPT-12</b> 10	1217	NA					2,000†	<b>SM/SP</b>	@8' <u>fine sand/trace silt to</u> olive brown, silty f. sand, damp, friable, no visible staining, slight pet. hyd. odor
							10		
							12		
							14		
<b>DPT-12</b> 15	1223	NA					9,000†	<b>SP</b>	@13' Lt. brownish gray fine sand/trace m. to coarse sand, dry, no visible staining, moderate pet. hyd. odor
							16		
							18		
<b>DPT-12</b> 20	1229	NA					700†	<b>ML</b>	@18' Grayish brown and dark grayish brown fine sandy silt, moist, micaceous, no apparent staining, <del>strong</del> mod. petroleum hydrocarbon odor
							20		
							22		
							24		
<b>DPT-12</b> 25	1235	NA					550†	<b>SM</b>	@23' Dark gray silty f. sand, damp, mod. pet. hyd. odor, apparent staining
							26	<b>SP</b>	@25' gray fine sand, damp, friable, possible staining, slight pet. hyd. odor
							28		
<b>DPT-12</b> 30		NA							
							30		
							32		
							34		
							36		
							38		
							40		
							42		

*samples scheduled for analysis*

*PID is not very sensitive*

Field Boring Log

Parsons

Job No. <b>74644i.01000</b>	Client/Site DFSP-Norwalk
Drilling Co./Method Direct Push Probe	Boring/Well Number <b>DPT-13</b>
Sampling Method Acetate-lined sampler	Sheet 1 of 1
Background Conditions Clear & cool	Drilling
Surface Conditions Soil	Start Date 09.14.09
	Finish Date 09.14.09
	Start Time 0729
	Finish Time 0756

Sample No. Sample Depth	Time	Sampler Blows	Increase Crimmer for analysis necessity	Instrument: PID			Depth in Feet	USCS Soil Type
				Auger	Sample	Breathing Zone		
							0	ML @0' <del>soil</del> DK. grayish brown f. sandy silt, dry to damp, no odor or visible staining
							2	
							4	SM @3' Lt. olive brown silty f. sand, damp - moist, no odor or visible staining (*)
DPT-13 5	0734	NA				1.0	6	
DPT-13 10	0740	NA				6.8	10	ML @8' DK. grayish brown f. sandy silt, moist, micaceous, *
DPT-13 15	0745	NA				9.6	16	SP @13' Lt. olive brown fine sand, damp, friable, *
DPT-13 20	0750	NA				3.4	20	SP @18' Gray fine sand, moist, friable, *
DPT-13 25	0756	NA				7.5	26	ML @23' DK. grayish brown silt of trace fine sand, wet, micaceous, *
DPT-13 30		NA					30	
							32	
							34	
							36	
							38	
							40	
							42	

Notes:

Geologist: **Quin Kinnebrew**  
 Reviewed By:  
 Type of Instrument/Serial No. **PID / PGM 7600**  
 Calibration Date/Gas: **09.09.09 / Bobotylene**  
 Sample Container:  No  Yes  
 Sample Analysed:  No  Yes  
 Personal Sampling:  No  Yes  
 Person Sampled:

*Samples scheduled for analysis*

*PID is moisture sensitive*





Geologist: **Quin Kinnebrew**

Type of Instrument/Serial No. **PID / PGM 7600**

Sample Container:  Yes  No

Personal Sampling:  Yes  No

Person Sampled: \_\_\_\_\_

Reviewed By: \_\_\_\_\_

Calibration Date/Gas: \_\_\_\_\_

Sample Analyses: \_\_\_\_\_

**Parsons**

**Field Boring Log**

Location of Boring/Well:		Job No. <b>74644i.01000</b>	Client/Site <b>DFSP-Norwalk</b>
Drilling Co./Method <b>Direct Push Probe</b>		Boring/Well Number <b>DPT-15</b>	
Sampling Method <b>Acetate-lined sampler</b>		Sheet <b>1 of 1</b>	
Background Conditions <b>Clear &amp; Warm</b>		Drilling	
Surface Conditions <b>Soil</b>		Start Date	Finish Date
		<b>09.10.09</b>	<b>09.10.09</b>

Sample No Sample Depth	Time	Sampler Blows	Heads Driven to Recovery	Instrument: <b>PID</b>			Depth in Feet	USCS Soil Type	Notes:
				Auger	Sample	Breathing Zone			
							0	SM	@ 0' Lt. olive brown silty fine sand, dry, no odor or visible staining (*)
							2		
							4		
DPT-15 5	0850	NA				3.9	6	SP	@ 4' Lt. yel. brown fine sand, dry, friable, *
							8		
DPT-15 10	0853	NA				2.8	10	SP	@ 8' Lt. olive brown fine sand, damp, friable, *
							12		
							14		
DPT-15 15	0900	NA				3.4	16	SP	@ 13' Gray fine sand w/trace medium sand, damp, friable, *
							18		
DPT-15 20	0907	NA				4.8	20	SP	@ 18' Lt. olive brown fine sand w/trace medium to coarse sand, moist, friable, *
							22		
							24		
DPT-15 25	0914	NA				4.0	26	ML	@ 23' DK. olive brown fine sandy silt, moist, micaceous, *
							28		
DPT-30		NA					30		
							32		
							34		
							36		
							38		
							40		
							42		

*Samples scheduled for analysis*

*PID = moisture sensitive*

Time 0835  
Time 0914

Geologist: **Quin Kinnebrew**

Type of Instrument/Serial No. **PID / PGM 7600**

Sample Container:  Yes  No

Personal Sampling:  Yes  No

Reviewed By:

Calibration Date/Gas: **09-09-09 / Isobutylene**

Sample Analyses:

Person Sampled:

Parsons

**Field Boring Log**

Location of Boring/Well:

Job No. **746441.01000**

Client/Site **DFSP-Norwalk**

Drilling Co./Method

Boring/Well Number

**Direct Push Probe**

**DPT-16**

Sampling Method

Sheet

**Acetate-lined sampler**

1 of 1

Background Conditions **Clear & warm**

Drilling

Surface Conditions **Soil**

Start Date

Finish Date

**09.10.09 09.10.09**

Notes:

Time

Time

**0928 1009**

Datum:

Sample No. Sample Depth	Time	Sampler Blows	Inches Driven % Recovery	Instrument: <b>PID</b>			Depth in Feet	USCS Soil Type	Notes:
				Auger	Sample	Breathing Zone			
							0	sm	@0' Lt. olive brown silty fine sand, dry, no odor or visible staining (*)
							2		
							4	SP	@~3' Lt. olive brown fine sand, damp, friable, *
<b>DPT-16</b>	<b>5 0947</b>	<b>NA</b>			<b>9.1</b>		6		
							8		
<b>DPT-16</b>	<b>10 0951</b>	<b>NA</b>			<b>8.3</b>		10	ML	@8' olive brown f. sandy silt, moist, micaceous, *
							12		
<b>DPT-16</b>	<b>15 0956</b>	<b>NA</b>			<b>8.6</b>		16		
							18		
<b>DPT-16</b>	<b>20 1002</b>	<b>NA</b>			<b>3.6</b>		20	SP	@13' Lt. olive brown and gray fine sand, damp, friable, *
							22		
<b>DPT-16</b>	<b>25 1009</b>	<b>NA</b>			<b>4.8</b>		26		
							28		
<b>DPT-16</b>	<b>30</b>	<b>NA</b>					30	CL	@23' Grayish brown silty clay, wet, micaceous, *
							32		
							34		
							36		
							38		
							40		
							42		

*PID = moisture sensitive*

Geologist: **Quin Kinnebrew**  
 Reviewed By: \_\_\_\_\_  
 Type of Instrument/Serial No. **PID / P6M-7600**  
 Calibration Date/Gas: **09-09-09 / Isobutylene**  
 Sample Container:  No  Yes  
 Personal Sampling:  No  Yes  
 Person Sampled: \_\_\_\_\_

Parsons

Field Boring Log

Location of Boring/Well:				Job No. <b>74644i.01000</b>			Client/Site <b>DFSP-Norwalk</b>		
Datum:				Drilling Co./Method			Boring/Well Number		
				Direct Push Probe			<b>DPT-17</b>		
				Sampling Method			Sheet		
				Acetate-lined sampler			1 of 1		
				Background Conditions <b>clear &amp; hot</b>			Drilling		
				Surface Conditions <b>Soil</b>			Start Date	Finish Date	
							09/10/09	09/10/09	
				Notes:			Time	Time	
				<b>Not logged 0-3'</b>			1025	1106	
Sample No.	Time	Sampler Blows	Inches Driven	Instrument: <b>PID</b>			Depth in Feet	USCS Soil Type	
Sample Depth			% Recovery	Auger	Sample	Breathing Zone			
							0		
							2		
							4		
<b>DPT-17</b>	<b>5</b>	<b>1041</b>	<b>NA</b>				6	<b>SM</b>	<b>@3'</b> Gray to dk gray silty fine sand damp, strong chemical odor, no apparent staining
							8		
<b>DPT-17</b>	<b>10</b>	<b>1046</b>	<b>NA</b>				10	<b>SM/ML</b>	<b>@8'</b> v. dk gray <sup>silty fine sand to</sup> fine sandy silt, moist micaceous, slight pet. hyd. odor, possible staining
							12		
<b>DPT-17</b>	<b>15</b>	<b>1051</b>	<b>NA</b>				16	<b>ML</b>	<b>@13'</b> DK gray f. sandy silt, moist, micaceous, slight pet. hyd. odor, possible staining
							18	<b>SP</b>	<b>@14'</b> light olive gray fine sand, damp, friable
<b>DPT-17</b>	<b>20</b>	<b>1058</b>	<b>NA</b>				20	<b>CL</b>	<b>@18'</b> v. dk gray <sup>silty</sup> clay <sup>all</sup> w/ trace fine to medium sand, wet, slight pet. hyd. odor, apparent staining
							22		
<b>DPT-17</b>	<b>25</b>	<b>1106</b>	<b>NA</b>				26	<b>SP</b>	<b>@23'</b> Gray fine sand, damp, friable, apparent staining, moderate fuel odor
<b>DPT-17</b>	<b>30</b>	<b>NA</b>					30		
							32		
							34		
							36		
							38		
							40		
							42		

PID = moisture sensitive

130+

9000+

7000+

130+

960+

Field Boring Log

Parsons

Location of Boring/Well:

Job No. 74644i.01000

Client/Site DFSP-Norwalk

Drilling Co./Method

Boring/Well Number

Direct Push Probe

DPT-18

Sampling Method

Acetate-lined sampler

Sheet

Background Conditions Clear & hot

1 of 1

Surface Conditions Asphalt

Drilling

Start Date

Finish Date

09.10.09 09.10.09

Notes: ~~not logged~~ OK

Time

Time

1120 1153

Datum:

Sample No.	Time	Sampler Blows	Instrument: PID	Depth in Feet	USCS Soil Type	Notes		
						Auger	Sample	Breathing Zone
				0	SM	Asphalt to olive brown		
				2	SM	3" Brown, silty fine sand, moist, no odor or visible staining (*)		
				4	SM	4.5' Lt. olive brown silty fine sand to fine sand, moist, friable, *		
DPT-18 5	1132	NA	3.6	6	ML	5' Olive brown fine sandy silt, moist, micaceous, *		
				8	ML	8' SAME		
DPT-18 10	1135	NA	16.4	10	ML	10' Olive brown silty fine sand, moist, micaceous, *		
				14	SM	13' v. dk. gray silty fine sand, moist, possible staining, very slight pet. hyd. odor		
DPT-18 15	1139	NA	65 <sup>+</sup>	16	SP	14' Olive brown fine sand, damp, friable, no apparent staining, v. slight pet. hyd. odor		
DPT-18 20	1143	NA	2900 <sup>+</sup>	20	CL	18' Black silty clay w/ trace fine sand, wet, strong pet. hyd. odor, stained		
				24	CL	18.5' Grades to greenish gray silty clay w/ trace fine sand, moist to wet, moderate pet. hyd. odor, apparent staining		
DPT-18 25	1153	NA	61 <sup>±</sup>	26	SM	23' Dark olive brown silty fine sand, saturated, micaceous, no apparent staining, slight pet. hyd. odor		
		NA		30				

Schedule for  
away 10/25  
10/26  
10/27  
10/28  
10/29  
10/30  
10/31

Geologist: **Quin Kinnebrew**  
Reviewed By:

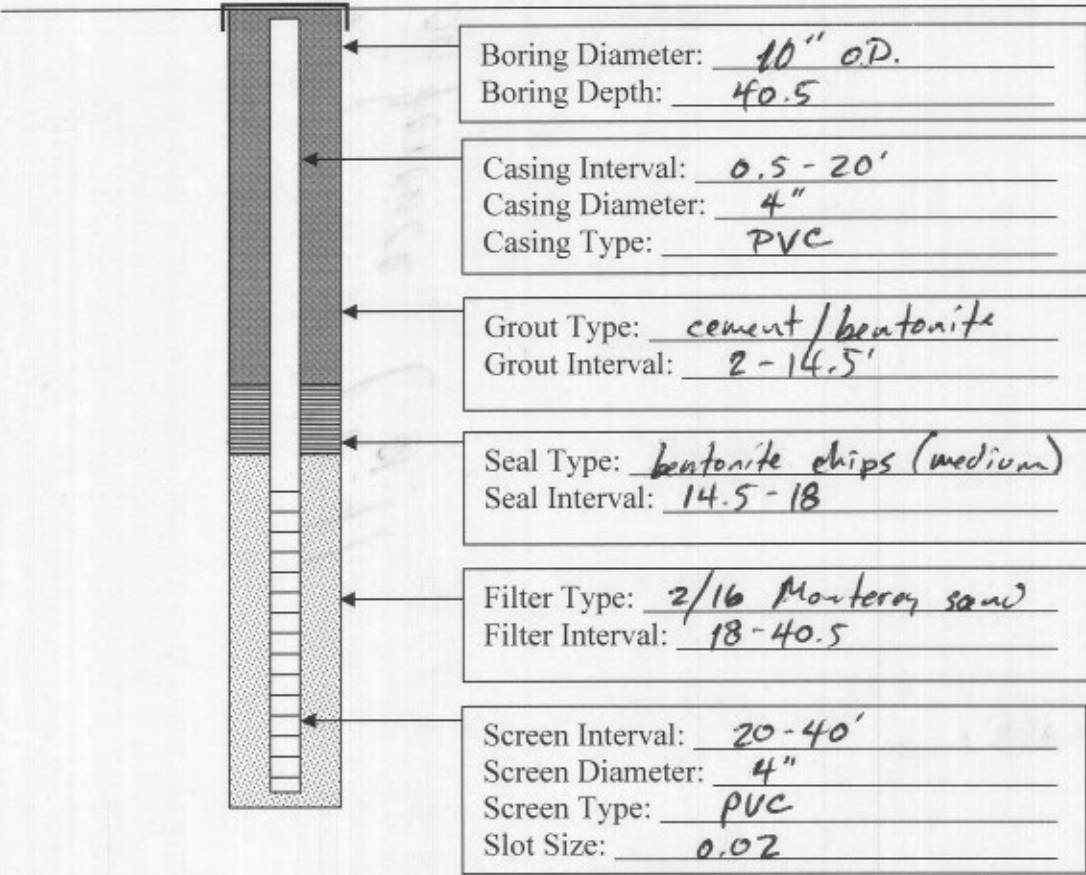
Type of Instrument/Serial No. **PID / P6m 7600**  
Calibration Date/Gas: **09.09.09 / IsoBoty/enc**

Sample Container:  Yes  No  
Sample Analyses:  Yes  No  
Personal Sampling:  Yes  No  
Person Sampled:



Project: <u>DFSP - Norwalk</u>	WELL CONSTRUCTION LOG FOR WELL <u>GMW-66</u>
Project Location: <u>"</u>	
Project Number: <u>746441</u>	
Well Location: <u>NEC of DFSP - Norwalk Facility</u>	Date Installed: <u>09-08-09</u>
Installed By: <u>Gross Drilling</u>	Observed By: <u>Quin Kinnebrew</u>
Method of Installation: <u>Hollow Stem Auger</u>	
Notes:	

well surface =  
flush mounted  
well box set  
in concrete  
(0-2' bgs)



**PARSONS**

