

**APPENDIX D**  
**BORING LOGS AND TRENCH LOGS**

## APPENDIX D – Boring Logs and Trench Logs

### Table of Contents

#### Boring Logs - Data Gap Samples

<b><u>Boring ID</u></b>	<b><u>ISRA Area</u></b>	<b><u>Boring ID</u></b>	<b><u>ISRA Area</u></b>
B1BS0082	B1-1	B1BS0129	B1-1
B1BS0083	B1-1	B1BS0130	B1-1
B1BS0084	B1-1	B1BS0149	B1-1
B1BS0085	B1-1	B1BS0150	B1-1
B1BS0086	B1-1	B1BS0151	B1-1
B1BS0087	B1-1	B1BS0152	B1-1
B1BS0088	B1-1	B1BS0153	B1-1
B1BS0089	B1-1	B1BS0154	B1-1
B1BS0090	B1-1	B1BS0155	B1-1
B1BS0091	B1-1	B1BS0157	B1-1
B1BS0092	B1-1	B1BS0158	B1-1
B1BS0093	B1-1	B1BS0159	B1-1
B1BS0094	B1-1	B1BS0173	B1-1
B1BS0096	B1-1	B1BS0174	B1-1
B1BS0106	B1-1	B1BS0175	B1-1
B1BS0107	B1-1	B1BS0069A	B1-2
B1BS0108	B1-1	B1BS0074B	B1-2
B1BS0109	B1-1	B1BS0075	B1-2
B1BS0110	B1-1	B1BS0076	B1-2
B1BS0111	B1-1	B1BS0077	B1-2
B1BS0112	B1-1	B1BS0077A	B1-2
B1BS0113	B1-1	B1BS0078	B1-2
B1BS0114	B1-1	B1BS0078A	B1-2
B1BS0115	B1-1	B1BS0079	B1-2
B1BS0116	B1-1	B1BS0080	B1-2
B1BS0117	B1-1	B1BS0081	B1-2
B1BS0118	B1-1	B1BS0081A	B1-2
B1BS0119	B1-1	B1BS0081B	B1-2
B1BS0120	B1-1	B1BS0098	B1-2
B1BS0121	B1-1	B1BS0099	B1-2
B1BS0122	B1-1	B1BS0100	B1-2
B1BS0123	B1-1	B1BS0101	B1-2
B1BS0124	B1-1	B1BS0102	B1-2
B1BS0125	B1-1	B1BS0102A	B1-2
B1BS0126	B1-1	B1BS0103	B1-2
B1BS0127	B1-1	B1BS0103A	B1-2
B1BS0128	B1-1	B1BS0104	B1-2

<b>Boring ID</b>	<b>ISRA Area</b>	<b>Boring ID</b>	<b>ISRA Area</b>
B1BS0105	B1-2	B1BS0202	B1-2
B1BS0147	B1-2	B1BS0203	B1-2
B1BS0148	B1-2	B1BS0204	B1-2
B1BS0156	B1-2	B1BS0206	B1-2
B1BS0156A	B1-2	B1BS0207	B1-2
B1BS0156B	B1-2	B1BS0208	B1-2
B1BS0160	B1-2	B1BS0209	B1-2
B1BS0161	B1-2	B1BS0210	B1-2
B1BS0162	B1-2	B1BS0211	B1-2
B1BS0163	B1-2	B1BS0212	B1-2
B1BS0164	B1-2	B1BS0213	B1-2
B1BS0165	B1-2	B1BS0214	B1-2
B1BS0166	B1-2	B1BS0215	B1-2
B1BS0167	B1-2	B1BS0216	B1-2
B1BS0168	B1-2	B1BS0217	B1-2
B1BS0169	B1-2	B1BS0217A	B1-2
B1BS0170	B1-2	B1BS0218	B1-2
B1BS0171	B1-2	B1BS0219	B1-2
B1BS0172	B1-2	B1BS0219A	B1-2
B1BS0176	B1-2	B1BS0220	B1-2
B1BS0177	B1-2	ENBS0045A	B1-2
B1BS0178	B1-2	ENBS0046A	B1-2
B1BS0179	B1-2	ENBS0084	CTLI-1
B1BS0180	B1-2	ENBS0094	CTLI-1
B1BS0181	B1-2	ENBS0094A	CTLI-1
B1BS0182	B1-2	ENBS0095	CTLI-1
B1BS0183	B1-2	ENBS0096	CTLI-1
B1BS0184	B1-2	ENBS0096A	CTLI-1
B1BS0185	B1-2	ENBS0148	CTLI-1
B1BS0186	B1-2	ENBS0149	CTLI-1
B1BS0187	B1-2	ENBS0150	CTLI-1
B1BS0188	B1-2	ENBS0151	CTLI-1
B1BS0189	B1-2	ENBS0152	CTLI-1
B1BS0190	B1-2	ENBS0153	CTLI-1
B1BS0191	B1-2	ENBS0154	CTLI-1
B1BS0192	B1-2	ENBS0155	CTLI-1
B1BS0193	B1-2	ENBS0156	CTLI-1
B1BS0194	B1-2	LFBS0209A	CTLI-1
B1BS0195	B1-2	LFBS0213A	CTLI-1
B1BS0196	B1-2	LFBS0245	CTLI-1
B1BS0197	B1-2	LFBS0246	CTLI-1
B1BS0198	B1-2	LFBS0246A	CTLI-1
B1BS0199	B1-2	LFBS0263	CTLI-1
B1BS0200	B1-2	LFBS0264	CTLI-1
B1BS0201	B1-2	LFBS0265	CTLI-1

<b>Boring ID</b>	<b>ISRA Area</b>	<b>Boring ID</b>	<b>ISRA Area</b>
LFBS0266	CTLI-1	LFBS0331	CTLI-1
LFBS0267	CTLI-1	LFBS0332	CTLI-1
LFBS0268	CTLI-1	LFBS0333	CTLI-1
LFBS0269	CTLI-1	LFBS0334	CTLI-1
LFBS0270	CTLI-1	LFBS0335	CTLI-1
LFBS0271	CTLI-1	LFBS0336	CTLI-1
LFBS0272	CTLI-1	LFBS0337	CTLI-1
LFBS0273	CTLI-1	LFBS0338	CTLI-1
LFBS0274	CTLI-1	ILBS0118A	IEL-1
LFBS0276	CTLI-1	ILBS0139A	IEL-1
LFBS0277	CTLI-1	ILBS0180A	IEL-1
LFBS0280	CTLI-1	ILBS0249	IEL-1
LFBS0281	CTLI-1	ILBS0250	IEL-1
LFBS0282	CTLI-1	ILBS0251	IEL-1
LFBS0283	CTLI-1	ILBS0252	IEL-1
LFBS0284	CTLI-1	ILBS0253	IEL-1
LFBS0285	CTLI-1	ILBS0306	IEL-1
LFBS0286	CTLI-1	ILBS0307	IEL-1
LFBS0287	CTLI-1	ILBS0308	IEL-1
LFBS0288	CTLI-1	ILBS0309	IEL-1
LFBS0289	CTLI-1	ILBS0310	IEL-1
LFBS0290	CTLI-1	ILBS0312	IEL-1
LFBS0291	CTLI-1	ILBS0313	IEL-1
LFBS0292	CTLI-1	ILBS0314	IEL-1
LFBS0293	CTLI-1	ILBS0315	IEL-1
LFBS0294	CTLI-1	ILBS0316	IEL-1
LFBS0295	CTLI-1	ILBS0317	IEL-1
LFBS0317	CTLI-1	ILBS0319	IEL-1
LFBS0318	CTLI-1	ILBS0321	IEL-1
LFBS0319	CTLI-1	ILBS0322	IEL-1
LFBS0320	CTLI-1	ILBS0324	IEL-1
LFBS0321	CTLI-1	ILBS0325	IEL-1
LFBS0321A	CTLI-1	ILBS0341	IEL-1
LFBS0322	CTLI-1	ILBS0311	IEL-1
LFBS0322B	CTLI-1		
LFBS0323	CTLI-1		
LFBS0323A	CTLI-1		
LFBS0324	CTLI-1		
LFBS0324A	CTLI-1		
LFBS0325	CTLI-1		
LFBS0326	CTLI-1		
LFBS0327	CTLI-1		
LFBS0328	CTLI-1		
LFBS0329	CTLI-1		
LFBS0330	CTLI-1		

### Boring Logs - Confirmation Samples

<b><u>Boring ID</u></b>	<b><u>ISRA Area</u></b>	<b><u>Boring ID</u></b>	<b><u>ISRA Area</u></b>
APET0100	AP/STP-1A	B1ET0307	B1-1
APET0101	AP/STP-1A	B1ET0308	B1-1
APET0102	AP/STP-1A	B1ET0309	B1-1
APET0400	AP/STP-1D	B1ET0310	B1-1
APET0401	AP/STP-1D	B1ET0311	B1-1
APET0402	AP/STP-1D	B1ET0312	B1-1
APET0403	AP/STP-1D	B1ET0313	B1-1
APET0404	AP/STP-1D	B1ET0314	B1-1
APET0405	AP/STP-1D	B1ET0315	B1-1
APET0406	AP/STP-1D	B1ET0316	B1-1
APET0407	AP/STP-1D	B1ET0317	B1-1
APET0408	AP/STP-1D	B1ET0318	B1-1
APET0409	AP/STP-1D	B1ET0319	B1-1
APET0410	AP/STP-1D	B1ET0320	B1-1
APET0411	AP/STP-1D	B1ET0321	B1-1
APET0600	AP/STP-1F	B1ET0322	B1-1
APET0601	AP/STP-1F	B1ET0323	B1-1
APET0602	AP/STP-1F	B1ET0324	B1-1
APET0603	AP/STP-1F	B1ET0325	B1-1
APET0604	AP/STP-1F	B1ET0326	B1-1
APET0605	AP/STP-1F	B1ET0400	B1-1
APET0606	AP/STP-1F	B1ET0401	B1-1
APET0607	AP/STP-1F	B1ET0402	B1-1
B1ET0100	B1-1	B1ET0403	B1-1
B1ET0101	B1-1	B1ET0404	B1-1
B1ET0102	B1-1	B1ET0405	B1-1
B1ET0103	B1-1	B1ET0406	B1-1
B1ET0104	B1-1	B1ET0407	B1-1
B1ET0105	B1-1	B1ET0408	B1-1
B1ET0106	B1-1	B1ET0409	B1-1
B1ET0200	B1-1	B1ET0410	B1-1
B1ET0201	B1-1	B1ET0411	B1-1
B1ET0300	B1-1	B1ET0412	B1-1
B1ET0301	B1-1	B1ET0413	B1-1
B1ET0302	B1-1	B1ET0414	B1-1
B1ET0303	B1-1	B1ET0415	B1-1
B1ET0304	B1-1	B1ET0416	B1-1
B1ET0305	B1-1	B1ET0417	B1-1
B1ET0306	B1-1	B1ET0418	B1-1

<b>Boring ID</b>	<b>ISRA Area</b>	<b>Boring ID</b>	<b>ISRA Area</b>
B1ET0419	B1-1	B1ET0541	B1-2
B1ET0420	B1-1	B1ET0542	B1-2
B1ET0421	B1-1	B1ET0543	B1-2
B1ET0500	B1-2	B1ET0544	B1-2
B1ET0501	B1-2	B1ET0545	B1-2
B1ET0502	B1-2	B1ET0546	B1-2
B1ET0503	B1-2	B1ET0547	B1-2
B1ET0503A	B1-2	B1ET0548	B1-2
B1ET0504	B1-2	B1ET0549	B1-2
B1ET0505	B1-2	B1ET0550	B1-2
B1ET0506	B1-2	B1ET0551	B1-2
B1ET0507	B1-2	B1ET0552	B1-2
B1ET0508	B1-2	B1ET0553	B1-2
B1ET0509	B1-2	B1ET0554	B1-2
B1ET0510	B1-2	B1ET0555	B1-2
B1ET0511	B1-2	B1ET0556	B1-2
B1ET0512	B1-2	B1ET0557	B1-2
B1ET0513	B1-2	B1ET0558	B1-2
B1ET0514	B1-2	B1ET0559	B1-2
B1ET0515	B1-2	B1ET0560	B1-2
B1ET0516	B1-2	B1ET0561	B1-2
B1ET0517	B1-2	B1ET0562	B1-2
B1ET0518	B1-2	B1ET0563	B1-2
B1ET0519	B1-2	B1ET0564	B1-2
B1ET0520	B1-2	B1ET0565	B1-2
B1ET0521	B1-2	B1ET0566	B1-2
B1ET0522	B1-2	B1ET0567	B1-2
B1ET0523	B1-2	B1ET0568	B1-2
B1ET0524	B1-2	B1ET0569	B1-2
B1ET0525	B1-2	B1ET0570	B1-2
B1ET0526	B1-2	B1ET0571	B1-2
B1ET0527	B1-2	B1ET0572	B1-2
B1ET0528	B1-2	B1ET0573	B1-2
B1ET0529	B1-2	B1ET0574	B1-2
B1ET0530	B1-2	B1ET0575	B1-2
B1ET0531	B1-2	B1ET0576	B1-2
B1ET0532	B1-2	B1ET0577	B1-2
B1ET0533	B1-2	B1ET0578	B1-2
B1ET0534	B1-2	B1ET0579	B1-2
B1ET0535	B1-2	B1ET0580	B1-2
B1ET0536	B1-2	B1ET0581	B1-2
B1ET0537	B1-2	B1ET0582	B1-2
B1ET0538	B1-2	B1ET0583	B1-2
B1ET0539	B1-2	B1ET0584	B1-2
B1ET0540	B1-2	B1ET0585	B1-2

<b>Boring ID</b>	<b>ISRA Area</b>	<b>Boring ID</b>	<b>ISRA Area</b>
B1ET0586	B1-2	B1ET0633	B1-2
B1ET0587	B1-2	B1ET0634	B1-2
B1ET0588	B1-2	B1ET0635	B1-2
B1ET0589	B1-2	B1ET0636	B1-2
B1ET0590	B1-2	B1ET0637	B1-2
B1ET0591	B1-2	B1ET0638	B1-2
B1ET0592	B1-2	B1ET0639	B1-2
B1ET0593	B1-2	B1ET0640	B1-2
B1ET0594	B1-2	B1ET0641	B1-2
B1ET0595	B1-2	B1ET0642	B1-2
B1ET0596	B1-2	B1ET0643	B1-2
B1ET0597	B1-2	B1ET0644	B1-2
B1ET0598	B1-2	B1ET0645	B1-2
B1ET0599	B1-2	B1ET0646	B1-2
B1ET0600	B1-2	B1ET0647	B1-2
B1ET0601	B1-2	B1ET0648	B1-2
B1ET0602	B1-2	B1ET0649	B1-2
B1ET0603	B1-2	B1ET0650	B1-2
B1ET0604	B1-2	B1ET0651	B1-2
B1ET0605	B1-2	B1ET0652	B1-2
B1ET0606	B1-2	B1ET0653	B1-2
B1ET0607	B1-2	B1ET0654	B1-2
B1ET0608	B1-2	B1ET0655	B1-2
B1ET0609	B1-2	B1ET0656	B1-2
B1ET0610	B1-2	B1ET0657	B1-2
B1ET0611	B1-2	B1ET0658	B1-2
B1ET0612	B1-2	B1ET0659	B1-2
B1ET0613	B1-2	B1ET0660	B1-2
B1ET0614	B1-2	B1ET0661	B1-2
B1ET0615	B1-2	B1ET0662	B1-2
B1ET0616	B1-2	B1ET0663	B1-2
B1ET0617	B1-2	B1ET0664	B1-2
B1ET0620	B1-2	B1ET0665	B1-2
B1ET0621	B1-2	B1ET0667	B1-2
B1ET0622	B1-2	B1ET0668	B1-2
B1ET0623	B1-2	B1ET0669	B1-2
B1ET0624	B1-2	B1ET0670	B1-2
B1ET0625	B1-2	B1ET0671	B1-2
B1ET0626	B1-2	B1ET0672	B1-2
B1ET0627	B1-2	B1ET0673	B1-2
B1ET0628	B1-2	B1ET0674	B1-2
B1ET0629	B1-2	B1ET0675	B1-2
B1ET0630	B1-2	B1ET0676	B1-2
B1ET0631	B1-2	B1ET0677	B1-2
B1ET0632	B1-2	B1ET0678	B1-2

---

<b><u>Boring ID</u></b>	<b><u>ISRA Area</u></b>	<b><u>Boring ID</u></b>	<b><u>ISRA Area</u></b>
B1ET0679	B1-2	LFET0103	CTLI-1
B1ET0680	B1-2	LFET0104	CTLI-1
B1ET0681	B1-2	LFET0105	CTLI-1
B1ET0682	B1-2	LFET0106	CTLI-1
B1ET0683	B1-2	LFET0107	CTLI-1
B1ET0684	B1-2	LFET0108	CTLI-1
B1ET0685	B1-2	LFET0109	CTLI-1
B1ET0686	B1-2	LFET0110	CTLI-1
B1ET0687	B1-2	LFET0111	CTLI-1
B1ET0688	B1-2	LFET0112	CTLI-1
B1ET0689	B1-2	LFET0113	CTLI-1
B1ET0690	B1-2	LFET0114	CTLI-1
B1ET0691	B1-2	LFET0115	CTLI-1
B1ET0692	B1-2	LFET0116	CTLI-1
B1ET0693	B1-2	LFET0117	CTLI-1
B1ET0694	B1-2	LFET0118	CTLI-1
B1ET0695	B1-2	LFET0200	CTLI-1
B1ET0696	B1-2	LFET0201	CTLI-1
B1ET0697	B1-2	LFET0202	CTLI-1
B1ET0698	B1-2	LFET0203	CTLI-1
LFET0100	CTLI-1	ILET0001	IEL-1
LFET0101	CTLI-1	ILET0002	IEL-1
LFET0102	CTLI-1		



### **Trench Logs**

<b><u>Trench ID</u></b>	<b><u>ISRA Area</u></b>	<b><u>Trench ID</u></b>	<b><u>ISRA Area</u></b>
APTS0199	AP/STP-1A	B1TS0299	B1-1C
APTS0499	AP/STP-1D	B1TS0399	B1-1D
APTS0699	AP/STP-1F	B1TS0599	B1-2
B1TS0199	B1-1A	LFTS0199	CLTI-1A and CTLI-1B
B1TS0499	B1-1B	ILTS0099	IEL-1



Boring ID: **B1BS0069A**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>4.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796832.57</b>	Easting (ft): <b>269329.00</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>01-25-2010</b>	Start Time: <b>12:55</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-25-2010</b>	Finish Time: <b>13:18</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments:	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-25-2010</b>	Backfill Time: <b>13:22</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
						0.0		SP-SM	Poorly Graded Sand with Silt, dark brown (7.5YR 3/2), loose, moist, contains organics [Native]	5	10	20	55	10	
						0.1									
						2			becomes brown (7.5YR 4/4), sand grades finer	5	10	10	65	10	
						3		SM	Silty Sand, dark brown (7.5YR 3/2), loose, moist [Native]				75	25	
						4			Sandstone, yellowish brown (10YR 5/4), hard [Chatsworth Formation] Total Depth = 4.0 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 13:08. Backfilled with soil cuttings.						
						5									
						6									
						7									
						8									
						9									
						10									

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0074B**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>24.0</b>	Project: <b>ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property</b>	
Northing (ft): <b>269372.76</b>	Easting (ft): <b>1796872.07</b>	Job Number: <b>1008208</b>	Site: <b>B1-2</b>
Drill Start Date: <b>05-24-2010</b>	Start Time: <b>08:50</b>	Logged By: <b>A. Goldenberg</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>05-24-2010</b>	Finish Time: <b>10:30</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Soil and leaves at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Samples retained in 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>05-24-2010</b>	Backfill Time: <b>10:35</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.6	S	1.2				0	[Dotted pattern]	SM	Silty Sand, dark brown (10YR 3/3), medium dense, moist, contains concrete debris, roots and rootlets, no odor or staining [Fill]		5	20	35	40
0.6 - 1.8	S					2	[Dotted pattern]	SM	Silty Sand, brownish yellow (10YR 6/6), dense, moist, no odor or staining [Alluvium]		10	35	30	25
1.8 - 6.0	S	1.8				4	[Dotted pattern]		becomes very pale brown (10YR 7/4), less silty, slightly friable		15	40	30	15
6.0 - 14.0	S					6	[Dotted pattern]		becomes very friable					
14.0 - 20.0	S	0.6				10	[Dotted pattern]							
20.0 - 24.0	S	1.2				14	[Diagonal lines]	SC	Clayey Sand, brown (10YR 4/3), dense, moist, no odor or staining [Alluvium]		5	35	35	25
24.0 - 24.0	S					16	[Diagonal lines]		becomes mottled brown (10YR 4/3), brownish yellow (10YR 6/6), and dark brown (7.5YR 3/4)					
24.0 - 24.0	S					18	[Diagonal lines]							
24.0 - 24.0	S					20	[Diagonal lines]							
24.0 - 24.0	S					22	[Diagonal lines]							
24.0 - 24.0	S					24	[Diagonal lines]		Sandstone, mottled brown (10YR 4/3) to strong brown (7.5YR 4/6), very dense, very moist, slightly weathered [Chatsworth Formation]					
24.0 - 24.0	S					24	[Diagonal lines]		Total Depth = 24.0 ft; refusal on bedrock.					
24.0 - 24.0	S					26	[Diagonal lines]		Collected soil samples S001 at 09:00, S002 at 09:15, S003 at 09:35, S004 at 09:46, S005 at 10:10, and S006 at 10:26.					
24.0 - 24.0	S					28	[Diagonal lines]		Backfilled with soil cuttings.					
24.0 - 24.0	S					30	[Diagonal lines]							

LOG OF BORING: OUTFALL009\_ISRA-2010.GPJ\_BOEING.GDT 3/30/11



Boring ID: **B1BS0075**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.2</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269383.03</b>	Easting (ft): <b>1796757.62</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>12:43</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>12:48</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	

Comments: <b>Bare soil at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>	Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>12:50</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.0	S			0.0		0		SM	Silty Sand with Gravel, dark brown (10YR 3/3), medium dense, moist, granitic gravel up to 1 inch diameter [Fill]	15	10	25	20	30
						2			Total Depth = 1.2 ft (14 in.); refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 12:45. Backfilled with auger cuttings.					
						4								
						6								
						8								
						10								
						12								
						14								
						16								
						18								
						20								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0076**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>4.3</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269336.07</b>	Easting (ft): <b>1796811.02</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>13:05</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>13:15</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	

Comments: <b>In drainage, vegetation at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>	Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>13:20</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
				0.0		0		SM	Silty Sand, dark brown (10YR 3/3), medium dense, moist, rootlets [Alluvium]				60	40
	s					4		SM	Silty Sand, yellowish brown (10YR 5/4), hard, moist [Weathered Chatsworth Formation Sandstone] Total Depth = 4.3 ft; refusal on Chatsworth Formation Sandstone.  Collected soil sample S001 at 13:10.  Backfilled with auger cuttings.	5	15	45	35	

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0077**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269316.20</b>	Easting (ft): <b>1796896.47</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-03-2009</b>	Start Time: <b>09:55</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-03-2009</b>	Finish Time: <b>10:10</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe 5400/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Rigney</b>	

Comments: <b>Bare soil at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Geoprobe macrocore with acetate sleeve</b>	Soil Backfill Date: <b>06-03-2009</b>	Backfill Time: <b>10:20</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, dark yellowish brown (10YR 4/4), dense, moist [Fill]	5	5	15	35	40
0.5 - 1.0	s			0.0		4			becomes dark greenish gray (GLE Y2 10G 4/1), no gravel, sand grades finer, decrease in fines	10	15	45	30	
Total Depth = 5.0 ft; terminated prior to refusal.														
Collected soil samples S001 at 10:00 and S002 at 10:15.														
Backfilled with geoprobe cuttings.														

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0077A**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property</b>	
Northing (ft): <b>269323.33</b>	Easting (ft): <b>1796897.26</b>	Job Number: <b>1008208</b>	Site: <b>B1-2</b>
Drill Start Date: <b>05-25-2010</b>	Start Time: <b>08:20</b>	Logged By: <b>A. Goldenberg</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>05-25-2010</b>	Finish Time: <b>09:01</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Soil and gravel at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Samples retained in 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>05-25-2010</b>	Backfill Time: <b>09:07</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.6	s			0.6		0		SM	Silty Sand with Gravel, yellowish brown (10YR 5/6), dense, dry to moist, subangular gravel, contains rootlets, no odor or staining [Fill]	15	5	25	25	30
0.6 - 2.1	s					1			becomes mottled brownish yellow (10YR 6/6) and dark yellowish brown (10YR 4/4), moist					
2.1 - 5.0				2.1		5			Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 08:25 and S002 at 08:50. Backfilled with soil cuttings.					
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009\_ISRA-2010.GPJ\_BOEING.GDT 3/30/11



Boring ID: **B1BS0078**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269280.17</b>	Easting (ft): <b>1796942.73</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-03-2009</b>	Start Time: <b>09:25</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-03-2009</b>	Finish Time: <b>09:34</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe 5400/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Rigney</b>	

Comments: <b>Soil and vegetation at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Geoprobe macrocore with acetate sleeve</b>	Soil Backfill Date: <b>06-03-2009</b>	Backfill Time: <b>09:45</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand with Gravel, yellowish brown (10YR 5/4), dense, moist, gravel and gravel-size chunks of concrete [Fill]	15	15	15	30	25
0.5 - 3.5	s			0.0		2		SM	Silty Sand, brownish yellow (10YR 6/6), hard, moist, some iron oxide staining [Weathered Chatsworth Formation Sandstone]				70	30
Total Depth = 5.0 ft; terminated prior to refusal. Collected soil samples S001 at 09:35 and S002 at 09:40. Backfilled with geoprobe cuttings.														

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09





Boring ID: **B1BS0078A**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property</b>	
Northing (ft): <b>269280.17</b>	Easting (ft): <b>1796942.73</b>	Job Number: <b>1008208</b>	Site: <b>B1-2</b>
Drill Start Date: <b>05-25-2010</b>	Start Time: <b>13:40</b>	Logged By: <b>A. Goldenberg</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>05-25-2010</b>	Finish Time: <b>14:10</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Brush-covered soil at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Samples retained in 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>05-25-2010</b>	Backfill Time: <b>14:15</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.4	s			0.4		0		SM	Silty Sand with Gravel, dark brown (10YR 3/3) to yellowish brown (10YR 5/4), dense, dry to moist, subangular gravel, contains few rootlets, no odor or staining [Fill]	15	5	20	20	40
0.4 - 0.7	s			0.7		4			Clayey Sandstone, yellowish brown (10YR 5/4) with minor light yellowish brown (10YR 6/4) mottling, very dense, moist, weathered, fractured, no odor or staining [Chatsworth Formation]					
						5			Total Depth = 5.0 ft; terminated prior to refusal on bedrock.  Collected soil samples S001 at 13:45 and S002 at 13:55. One step-out 1 ft to northwest required for sample volume.  Backfilled with soil cuttings.					
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009 - ISRA-2010.GPJ BOEING.GDT 3/30/11



Boring ID: **B1BS0079**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.3</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269239.01</b>	Easting (ft): <b>1796779.99</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>13:25</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>13:33</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	
Comments: <b>On steep hillside, soil and vegetation at surface</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>		Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>13:35</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	S			0.0		0		SM	Silty Sand, light brown (7.5YR 6/4), loose, dry, rootlets [Alluvium]	5	15	15	50	15
<p>Total Depth = 1.3 ft (16 in.); refusal on weathered Chatsworth Formation Sandstone.</p> <p>Collected soil sample S001 at 13:30.</p> <p>Backfilled with auger cuttings.</p>														

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0080**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269192.68</b>	Easting (ft): <b>1796756.46</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-03-2009</b>	Start Time: <b>07:40</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-03-2009</b>	Finish Time: <b>07:50</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe 5400/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Rigney</b>	

Comments: <b>Asphalt at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Geoprobe macrocore with acetate sleeve</b>	Soil Backfill Date: <b>06-03-2009</b>	Backfill Time: <b>08:10</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
				0.0		0			Asphalt 3 inches thick					
	s					0		SM	Silty Sand, light brown (7.5YR 6/3), loose, dry, angular gravel [Fill]	10	10	15	40	25
	s			0.0		4		SM	Silty Sand, brown (7.5YR 5/4), medium dense, moist, rootlets [Alluvium]		10	10	40	40
						6			Total Depth = 5.0 ft; terminated prior to refusal. Collected soil samples S001 and D001 at 07:43 and S002 at 07:50. Backfilled with geoprobe cuttings.					
						8								
						10								
						12								
						14								
						16								
						18								
						20								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0081**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269143.53</b>	Easting (ft): <b>1796817.51</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-03-2009</b>	Start Time: <b>09:12</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-03-2009</b>	Finish Time: <b>09:16</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe 5400/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Rigney</b>	

Comments: <b>Light vegetation on surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Geoprobe macrocore with acetate sleeve</b>	Soil Backfill Date: <b>06-03-2009</b>	Backfill Time: <b>09:25</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, dark brown (10YR 3/3), dense, moist [Alluvium]				60	40
						1			Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 09:20. Backfilled with bentonite.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0081A**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL ISRA Sampling - Outfall 008 Area</b>	
Northing (ft): <b>269143.53</b>	Easting (ft): <b>1796817.51</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>07-14-2009</b>	Start Time: <b>12:20</b>	Logged By: <b>S. Valenzuela</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>07-14-2009</b>	Finish Time: <b>12:30</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Ben Cisneros</b>	

Comments: <b>Exposed soil with sparse vegetation at surface; resample location</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Grab sample collected in 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>07-14-2009</b>	Backfill Time: <b>12:30</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		CL	Sandy Lean Clay, yellowish brown (10YR 5/4), stiff, dry, medium plasticity fines, high dry strength, strong cementation [Alluvium]		tr	15	25	60
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock.  Collected soil sample S001.  Backfilled with auger cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL008.GPJ BOEING.GDT 12/22/09



Boring ID: **B1BS0081B**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>3.5</b>	Project: <b>ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property</b>	
Northing (ft): <b>269143.53</b>	Easting (ft): <b>1796817.51</b>	Job Number: <b>1008208</b>	Site: <b>B1-2</b>
Drill Start Date: <b>10-13-2010</b>	Start Time: <b>10:40</b>	Logged By: <b>S. Aichner</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>10-13-2010</b>	Finish Time: <b>11:00</b>	Drilling Contractor: <b>MP Environmental Svcs.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Grab (hand sampling)</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>R. Luna</b>	

Comments: <b>Trench ISRA-B1-2 sidewall location</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Samples retained in 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>10-13-2010</b>	Backfill Time: <b>11:05</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.2	s			0.0		0		SM	Silty Sand, yellowish brown (10YR 5/4), loose, dry, micaceous		10	10	60	20
						1			↙ becomes dark yellowish brown (10YR 3/4)					
						2								
						3								
				0.2		4			Total Depth = 3.5 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 10:50 and S002 at 11:00. Backfilled with auger cuttings.					
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009\_ISRA-2010.GPJ BOEING.GDT 3/25/11



Boring ID: **B1BS0082**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269082.59</b>	Easting (ft): <b>1796834.70</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-03-2009</b>	Start Time: <b>08:25</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-03-2009</b>	Finish Time: <b>08:40</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe 5400/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Rigney</b>	

Comments: <b>Soil with some road base and vegetation at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Geoprobe macrocore with acetate sleeve</b>	Soil Backfill Date: <b>06-03-2009</b>	Backfill Time: <b>08:45</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, dark brown (7.5YR 3/3), moist [Fill]				60	40
1.5 - 2.0						2		SM	Silty Sand, brown (10YR 5/3), moist, rootlets [Alluvium]			10	60	30
3.5 - 4.0	s			0.0		4								
Total Depth = 5.0 ft; terminated prior to refusal. Collected soil samples S001 at 08:30 and S002 at 08:40. Backfilled with geoprobe cuttings.														

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0083**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>1.5</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269056.23</b>	Easting (ft): <b>1796871.56</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-03-2009</b>	Start Time: <b>08:52</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-03-2009</b>	Finish Time: <b>08:55</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe 5400/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Rigney</b>	

Comments: **Soil with sparse vegetation at surface** Well Comp. Date: **N/A** Completion Time: **N/A**  
 Samplers: **Geoprobe macrocore with acetate sleeve** Soil Backfill Date: **06-03-2009** Backfill Time: **09:00**

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, brownish yellow (10YR 6/6), dense, moist [Alluvium]			10	60	30
						2			Total Depth = 1.5 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 08:55. Backfilled with geoprobe cuttings.					
						4								
						6								
						8								
						10								
						12								
						14								
						16								
						18								
						20								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09





Boring ID: **B1BS0084**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.3</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269002.47</b>	Easting (ft): <b>1796868.48</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>10:15</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>10:20</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	

Comments:	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>	Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>10:25</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.0		0		SM	Silty Sand with Gravel, brown (10YR 5/3), loose, dry [Alluvium]	15	10	20	35	20
<p>Total Depth = 1.3 ft (16 in.); refusal on weathered Chatsworth Formation Sandstone.</p> <p>Collected soil sample S001 at 10:20.</p> <p>Backfilled with auger cuttings.</p>														

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0085**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.0</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>268944.28</b>	Easting (ft): <b>1796835.51</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>10:45</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>10:52</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	

Comments: <b>Vegetation at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>	Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>10:55</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.0	S			0.0		0		SM	Silty Sand with Gravel, brown (10YR 5/3), loose, dry [Alluvium]	15	10	20	35	20
						2			Total Depth = 1.0 ft (12 in.); refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 10:50. Backfilled with auger cuttings.					
						4								
						6								
						8								
						10								
						12								
						14								
						16								
						18								
						20								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0086**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.8</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269005.74</b>	Easting (ft): <b>1796903.55</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>10:08</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>10:17</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	

Comments: <b>Vegetation at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>	Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>10:20</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.0	S			0.0		0		SM	Silty Sand, dark brown (7.5YR 3/3), loose, dry, rootlets [Alluvium]	5		10	45	40
						2			Total Depth = 1.8 ft (22 in.); refusal on weathered Chatsworth Formation Sandstone.  Collected soil sample S001 at 10:10.  Backfilled with auger cuttings.					
						4								
						6								
						8								
						10								
						12								
						14								
						16								
						18								
						20								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0087**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.0</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>268928.42</b>	Easting (ft): <b>1796961.83</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>12:20</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>12:25</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	

Comments: <b>Vegetation at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>	Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>12:30</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.125	S					0		SM	Silty Sand, dark brown (10YR 3/3), loose, dry, rootlets [Alluvium]	10	15	15	25	35
Total Depth = 1.0 ft (12 in.); refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 12:22. Backfilled with auger cuttings.														

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0088**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.7</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269125.14</b>	Easting (ft): <b>1797098.98</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>11:43</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>11:48</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	

Comments: <b>In drainage, bare soil at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>	Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>11:51</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.7	S					0		SM	Silty Sand, brownish yellow (10YR 6/6), medium dense, dry [Alluvium]	10	10	20	35	25
						1			Total Depth = 0.7 ft (8 in.); refusal on weathered Chatsworth Formation Sandstone.  Collected soil sample S001 at 11:45.  Backfilled with auger cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0089**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269271.33</b>	Easting (ft): <b>1797129.92</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>11:05</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>11:10</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Slide Hammer</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	

Comments:	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>	Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>11:15</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, brownish yellow (10YR 6/6), dense, dry, angular sandstone gravel [Alluvium]	10	10	10	55	15
						1			Total Depth = 0.5 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 11:10. Backfilled with native soil.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0090**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.0</b>	Project: <b>SSFL ISRA Sampling - Outfall 009 Area</b>	
Northing (ft): <b>269007.74</b>	Easting (ft): <b>1797190.91</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-05-2009</b>	Start Time: <b>11:52</b>	Logged By: <b>B. Martasin, P.G. #8356</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>06-05-2009</b>	Finish Time: <b>11:57</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>B. Cisneros</b>	

Comments: <b>Bare soil at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Slide hammer with stainless steel sleeve</b>	Soil Backfill Date: <b>06-05-2009</b>	Backfill Time: <b>12:00</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.125	S					0		SM	Silty Sand, dark brown (10YR 3/3), loose, dry, rootlets [Alluvium]	10	10	20	30	30
Total Depth = 1.0 ft (12 in.); refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 11:55. Backfilled with auger cuttings.														

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 6/16/09



Boring ID: **B1BS0091**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL ISRA Sampling - Outfall 008 Area</b>	
Northing (ft): <b>269184.26</b>	Easting (ft): <b>1797089.44</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-30-2009</b>	Start Time: <b>12:12</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>06-30-2009</b>	Finish Time: <b>12:16</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Paul Iler</b>	
Comments: <b>About 4 ft N of drainage, loose sandstone pieces on soil surface</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Grab sample collected in 6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>06-30-2009</b>	Backfill Time: <b>12:28</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, brown (10YR 5/3), very loose, dry, chipped pieces of sandstone, no cementation, mica present [Native]	5	25	25	15	30
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock.  Collected soil sample S001.  Backfilled with auger cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL008.GPJ BOEING.GDT 12/16/09





Boring ID: **B1BS0092**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL ISRA Sampling - Outfall 008 Area</b>	
Northing (ft): <b>269073.58</b>	Easting (ft): <b>1797173.77</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-30-2009</b>	Start Time: <b>10:31</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>06-30-2009</b>	Finish Time: <b>10:51</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Paul Iler</b>	
Comments: <b>On slight slope, exposed soil with sparse vegetation at surface, no debris</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Grab sample collected in 6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>06-30-2009</b>	Backfill Time: <b>10:52</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, grayish brown (10YR 5/2), very loose, dry, fine gravel, no cementation [Native]	tr	20	40		40
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 after removing 1 inch of surficial soil. Backfilled with auger cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL008.GPJ BOEING.GDT 12/16/09



Boring ID: **B1BS0093**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL ISRA Sampling - Outfall 008 Area</b>	
Northing (ft): <b>269052.46</b>	Easting (ft): <b>1797042.55</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-30-2009</b>	Start Time: <b>11:21</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>06-30-2009</b>	Finish Time: <b>11:24</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Paul Iler</b>	
Comments: <b>Near rock outcrop, loose soil with low, dry vegetation at surface, no debris</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Grab sample collected in 6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>06-30-2009</b>	Backfill Time: <b>11:34</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, dark grayish brown (10YR 4/2), very loose, dry, no to weak cementation, contains hardened pea-size soil nodules, mica present [Native]	tr	20	30	15	35
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock.  Collected soil sample S001.  Backfilled with auger cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL008.GPJ BOEING.GDT 12/16/09



Boring ID: **B1BS0094**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL ISRA Sampling - Outfall 008 Area</b>	
Northing (ft): <b>269036.76</b>	Easting (ft): <b>1797082.13</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-30-2009</b>	Start Time: <b>10:59</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>06-30-2009</b>	Finish Time: <b>11:09</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Paul Iler</b>	
Comments: <b>On slight slope, loose soil with sparse vegetation at surface, no debris</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Grab sample collected in 6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>06-30-2009</b>	Backfill Time: <b>11:15</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, brown (10YR 5/3), very loose, dry, no to weak cementation, contains hardened pea-size soil nodules, organic debris (small bits of leaves and twigs), mica present [Native]	tr	20	30	10	40
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock.  Collected soil sample S001.  Backfilled with auger cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL008.GPJ BOEING.GDT 12/16/09



Boring ID: **B1BS0096**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL ISRA Sampling - Outfall 008 Area</b>	
Northing (ft): <b>269154.31</b>	Easting (ft): <b>1797084.22</b>	Job Number: <b>1891614</b>	Site: <b>B-1 Area</b>
Drill Start Date: <b>06-30-2009</b>	Start Time: <b>11:46</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>06-30-2009</b>	Finish Time: <b>11:51</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Paul Iler</b>	
Comments: <b>On slope, loose soil with vegetation and loose twigs at surface, no debris</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Grab sample collected in 6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>06-30-2009</b>	Backfill Time: <b>11:56</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, light yellowish brown (2.5Y 6/3), very loose, dry, trace sandstone fragments, no cementation, mica present [Native]	tr	20	25	25	30
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock.  Collected soil sample S001.  Backfilled with auger cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL008.GPJ BOEING.GDT 12/16/09



Boring ID: **B1BS0098**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796841.91</b>	Easting (ft): <b>269337.50</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>11:21</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>12:29</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>4.5</b> ▽	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments: <b>Dead leaves at bottom of drainage next to 3-ft-wide concrete swale</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>12:35</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand, dark brown (7.5YR 3/2), loose, moist [Native]				60	40
				0.1		1			↙ becomes dark yellowish brown (10YR 4/4), decrease in silt content				70	30
				0.1		2								
				0.1		3								
				0.1		4								
				0.1	▽	5			↙ becomes wet					
						5			Total Depth = 5.0 ft; terminated due to water infiltration and saturated soil. Collected soil samples S001 at 11:29 and S002 (from second boring) at 11:55. Backfilled with soil cuttings.					
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0099**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>4.3</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796854.60</b>	Easting (ft): <b>269357.68</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>12:53</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>13:24</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>4.3</b> ▽	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments: <b>Dead leaves at bottom of drainage next to 3-ft-wide concrete swale</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>13:27</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand, dark brown (7.5YR 3/2), loose, moist [Native]				60	40
0.1 - 0.2						1			↙ becomes dark yellowish brown (10YR 4/4), decrease in silt content				70	30
0.2 - 0.3						2								
0.3 - 0.4						3								
0.4 - 0.5	s			0.1	▽	4								
0.5 - 0.6						5			Total Depth = 4.3 ft; terminated due to water infiltration and saturated soil. Collected soil samples S001 at 13:09 and S002 at 13:35. Backfilled with soil cuttings.					
0.6 - 0.7						6								
0.7 - 0.8						7								
0.8 - 0.9						8								
0.9 - 1.0						9								
1.0 - 1.1						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0100**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796842.01</b>	Easting (ft): <b>269315.06</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>08:27</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>09:22</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments:	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>09:23</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.7	s			0.7		0		SM	Silty Sand, dark brown (7.5YR 3/2), loose, moist, coarse sand-size sandstone fragments [Native]		10	15	55	20
0.3 - 0.7						0.3			becomes brown (7.5YR 4/2), sand grades fine				80	20
0.3 - 0.5	s			0.3		0.3								
Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 08:38 and S002 at 09:12. Backfilled with soil cuttings.														

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0101**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>3.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796857.45</b>	Easting (ft): <b>269299.40</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>09:51</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>10:36</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments: <b>On steep slope, vegetation at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>10:40</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.2	s			0.2		0		SM	Silty Sand, brown (7.5YR 4/4), loose, moist [Native]			10	60	30
						1			becomes dark yellowish brown (10YR 4/4), sand grades coarser, decrease in silt content, trace gravel-size sandstone fragments	tr	5	5	75	15
0.2 - 0.4	s			0.2		3								
						4			Sandstone, weathered [Chatsworth Formation] Total Depth = 3.5 ft; terminated due to refusal on bedrock. Collected soil samples S001 at 10:01 and S002 at 10:33. Backfilled with soil cuttings.					
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10





Boring ID: **B1BS0102**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796810.84</b>	Easting (ft): <b>269316.44</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>01-28-2010</b>	Start Time: <b>07:50</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-28-2010</b>	Finish Time: <b>08:10</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments: <b>At bottom of drainage, leaves and heavy brush at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-28-2010</b>	Backfill Time: <b>08:15</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.2	s			0.2		0		SM	Silty Sand, dark brown (7.5YR 3/2), loose, moist, contains organics [Native]				60	40
						1.5			Sandstone, yellowish brown (10YR 5/4), hard, massive [Chatsworth Formation] Total Depth = 1.5 ft; terminated due to refusal on bedrock. Attempted step-out 3 ft to southwest and encountered bedrock at same depth.  Collected soil sample S001 at 07:55.  Backfilled with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0102A**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>3.8</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796810.84</b>	Easting (ft): <b>269316.44</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>08:31</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>09:12</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>3.8</b> ▽	Date / Time: <b>03-02-2010 09:12</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>Near bottom of drainage, leaves and heavy brush at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>09:16</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0		SM	Silty Sand, dark brown (7.5YR 3/2), loose, moist, contains organics [Native]				60	40
						2			↙ becomes dark yellowish brown (10YR 3/4), increase in silt content (SM/ML)				50	50
				0.1	▽	3								
						4			Total Depth = 3.8 ft; terminated due to water in borehole. Attempted step-out 4 ft to southeast; met refusal on bedrock at 1.5 ft, as at B1BS102.  Collected soil sample S002 at 09:05.  Backfilled both locations with soil cuttings.					
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0103**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>2.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796796.71</b>	Easting (ft): <b>269313.61</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>01-28-2010</b>	Start Time: <b>08:35</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-28-2010</b>	Finish Time: <b>08:54</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>2 ▽</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments: <b>Bare soil at bottom of drainage</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-28-2010</b>	Backfill Time: <b>09:00</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, dark brown (7.5YR 3/2), loose, moist, gravel consists of sandstone fragments [Stream Deposits]	10	15	25	30	20
						2			Sandstone [Chatsworth Formation] Total Depth = 2.0 ft; terminated due to refusal on bedrock. Attempted step-out 3 ft to northeast and encountered water at 2.0 ft.  Collected soil sample S001 at 08:41.  Backfilled both borings with soil cuttings.					
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0103A**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796796.71</b>	Easting (ft): <b>269313.61</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>09:40</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>10:25</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>Bare soil on bank 3 ft northwest of B1BS0103</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>10:30</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0		SM	Silty Sand, dark brown (10YR 3/3), loose, moist, contains fragments of sandstone and asphalt pavement [Fill]				60	40
				0.0		1								
						2								
						3		SM	Silty Sand, dark yellowish brown (10YR 4/4), medium dense, moist, possibly weathered bedrock [Native]				70	30
						4								
				0.0		5			becomes dense Total Depth = 5.0 ft (second attempt); terminated prior to refusal on bedrock. First attempt, next to B1BS0103, encountered water at 2 ft. Stepped out 3 ft to northwest (2 ft higher up bank). Collected soil sample S002 at 10:20. Backfilled both locations with soil cuttings.					
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10





Boring ID: **B1BS0104**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796820.71</b>	Easting (ft): <b>269329.60</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>01-25-2010</b>	Start Time: <b>12:22</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-25-2010</b>	Finish Time: <b>12:38</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Brush and leaves at bottom of drainage</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-25-2010</b>	Backfill Time: <b>12:41</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.1		0		SM	Silty Sand, dark brown (7.5YR 3/2), loose, wet, contains organics [Native]			10	70	20
<p>Total Depth = 0.5 ft; terminated due to refusal on asphalt/gunite swale. Stepped out 3 ft to north to lower point in drainage; encountered water at 0.5 ft.</p> <p>Collected soil sample S001 at 12:28 at first location.</p> <p>Backfilled both borings with soil cuttings.</p>														
						1								
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0105**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796810.84</b>	Easting (ft): <b>269338.92</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>01-25-2010</b>	Start Time: <b>12:05</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-25-2010</b>	Finish Time: <b>12:09</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Top slope of drainage, surface covered with weeds</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-25-2010</b>	Backfill Time: <b>12:12</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.2		0		SM	Silty Sand, very dark brown (7.5YR 2.5/2), loose, moist [Native]				75	25
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 (hold) at 12:07. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0106**

Borehole Diam. (in.): <b>2-1/4</b>	Total Depth (ft): <b>2.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796860.37</b>	Easting (ft): <b>269066.00</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Metals)</b>
Drill Start Date: <b>01-25-2010</b>	Start Time: <b>11:30</b>	Logged By: <b>S. Aichner</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-25-2010</b>	Finish Time: <b>11:50</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Eric / Walter</b>	

Comments: <b>Hydroseeded native soil</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Macrocore, discrete sample retained in 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-25-2010</b>	Backfill Time: <b>12:00</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s			0.0		0		SM	Silty Sand, dark brown (10YR 3/3), medium dense, moist, trace clay, micaceous [Native]				80	20
						1		SP-SM	Poorly Graded Sand with Silt, very pale brown (10YR 7/3), loose, moist, micaceous, possibly weathered sandstone [Native]			50	40	10
						2			Sandstone [Chatsworth Formation] Total Depth = 2.0 ft; terminated due to refusal on bedrock.  Collected soil sample S001 at 11:40.  Backfilled with soil cuttings topped off with hydrated bentonite.					
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0107**

Borehole Diam. (in.): <b>2-1/4</b>	Total Depth (ft): <b>4.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796847.41</b>	Easting (ft): <b>269077.57</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Metals)</b>
Drill Start Date: <b>01-25-2010</b>	Start Time: <b>12:00</b>	Logged By: <b>S. Aichner</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-25-2010</b>	Finish Time: <b>12:35</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Eric / Walter</b>	

Comments: <b>Hydroseeded native soil</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Macrocore, discrete sample retained in 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-25-2010</b>	Backfill Time: <b>12:37</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.2	s			0.2		0		SM	Silty Sand, brown (7.5YR 4/4), medium dense, moist, trace clay, micaceous [Native]				80	20
0.2 - 0.3	s			0.3		3			becomes strong brown (7.5YR 4/6), no clay					
						4			Sandstone [Chatsworth Formation] Total Depth = 4.0 ft; terminated due to refusal on bedrock. Collected soil samples S001 at 12:20 and S002 at 12:30. Backfilled with soil cuttings topped off with hydrated bentonite.					
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10





Boring ID: **B1BS0108**

Borehole Diam. (in.): <b>2-1/4</b>	Total Depth (ft): <b>13.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796873.00</b>	Easting (ft): <b>269104.80</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Metals)</b>
Drill Start Date: <b>01-25-2010</b>	Start Time: <b>12:40</b>	Logged By: <b>S. Aichner</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-25-2010</b>	Finish Time: <b>13:25</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Eric / Walter</b>	

Comments: <b>Hydroseeded native soil</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Macrocore, discrete samples retained in 6-inch stainless steel sleeves</b>	Soil Backfill Date: <b>01-25-2010</b>	Backfill Time: <b>13:30</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.0		0		SM	Silty Sand, brown (10YR 4/3), medium dense, moist, trace clay, micaceous [Native]				80	20
						2			becomes brown (7.5YR 4/4), no clay					
0.1 - 0.2	s			0.1		4								
						6								
						8								
						10								
						12								
						14			Sandstone [Chatsworth Formation]					
						14			Total Depth = 13.5 ft; terminated due to refusal on bedrock.					
						14			Collected soil samples S001 at 12:50 and S002 at 13:00.					
						14			Backfilled with soil cuttings topped off with hydrated bentonite.					
						16								
						18								
						20								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0109**

Borehole Diam. (in.): <b>2-1/4</b>	Total Depth (ft): <b>6.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796880.02</b>	Easting (ft): <b>269075.88</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Metals)</b>
Drill Start Date: <b>01-25-2010</b>	Start Time: <b>13:35</b>	Logged By: <b>S. Aichner</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-25-2010</b>	Finish Time: <b>14:00</b>	Drilling Contractor: <b>Strongarm</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Geoprobe/Direct Push</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>Eric / Walter</b>	

Comments: <b>Native soil and shrubs</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Macrocore, discrete samples retained in 6-inch stainless steel sleeves</b>	Soil Backfill Date: <b>01-25-2010</b>	Backfill Time: <b>14:05</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.3	s			0.3		0		SM	Silty Sand, dark brown (10YR 3/3), medium dense, moist, trace clay, micaceous [Native]				80	20
0.3 - 0.4	s			0.4		1			↓ becomes brown (7.5YR 4/4), no clay					
6.0						6			Total Depth = 6.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 13:45 and S002 at 13:55. Backfilled with soil cuttings topped off with hydrated bentonite.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0110**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796898.57</b>	Easting (ft): <b>269067.37</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Metals)</b>
Drill Start Date: <b>02-09-2010</b>	Start Time: <b>08:30</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>02-09-2010</b>	Finish Time: <b>08:48</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments: <b>Relatively flat area covered with brush and weeds</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>02-09-2010</b>	Backfill Time: <b>08:50</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.2	s	0.2				0		SM	Silty Sand, dark yellowish brown (10YR 4/6), loose, moist [Native]	tr		tr	70	30
						1			↙ becomes brown (10YR 4/3), increase in silt content				65	35
						2								
						3								
						4								
						5			↙ becomes dark yellowish brown (10YR 4/4), medium dense, decrease in silt content				80	20
						5			Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 08:33 and S002 at 08:48. Backfilled with soil cuttings.					
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0111**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797057.27</b>	Easting (ft): <b>269212.98</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>08:48</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>08:54</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	
Comments: <b>Burnt vegetation, rocks, and metal debris at surface; removed 1 in. of topsoil</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>08:54</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SW-SM	Well Graded Sand with Silt, brown (10YR 4/3), medium dense, moist, trace rootlets [Native]	tr	20	40	30	10
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock.  Collected soil sample S001 at 08:49.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0112**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797064.24</b>	Easting (ft): <b>269250.49</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-28-2010</b>	Start Time: <b>08:32</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-28-2010</b>	Finish Time: <b>08:36</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger and Slam Bar</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	
Comments: <b>In drainage filled with dead vegetation debris</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>01-28-2010</b>	Backfill Time: <b>08:37</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.2		0		SW	Well Graded Sand, very dark grayish brown (10YR 3/2), loose, moist, contains rootlets, mica [Native]		30	35	30	5
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 at 08:33. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0113**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797116.70</b>	Easting (ft): <b>269228.68</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-28-2010</b>	Start Time: <b>08:50</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-28-2010</b>	Finish Time: <b>08:58</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger and Slam Bar</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>Small clearing on slope surrounded by vegetation</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-28-2010</b>	Backfill Time: <b>08:59</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.0		0		SP-SM	Poorly Graded Sand with Silt, very dark grayish brown (10YR 3/2), loose, moist, contains rootlets, mica [Native]	tr	20	30	40	10
	S					1			Sandstone, yellowish brown (10YR 5/6), weathered, contains quartz, feldspar, and biotite [Chatsworth Formation] Total Depth = 0.5 ft; terminated due to refusal on bedrock.  Collected soil samples S001 at 08:53 and duplicate D001 at 08:56.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0114**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>4.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797022.13</b>	Easting (ft): <b>269114.17</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>02-09-2010</b>	Start Time: <b>08:55</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>02-09-2010</b>	Finish Time: <b>09:05</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>3</b> ▽	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments: <b>Grass and vegetation at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>02-09-2010</b>	Backfill Time: <b>09:05</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, dark grayish brown (10YR 4/2), moist [Native]			5	65	30
						3			becomes wet					
						4.5			Sandstone [Chatsworth Formation] Total Depth = 4.5 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 08:56. Backfilled with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0115**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797123.17</b>	Easting (ft): <b>269176.13</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>14:04</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>14:16</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>Loose vegetation debris at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>14:16</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SW	Well Graded Sand, yellowish brown (10YR 5/8), medium dense, moist, mica present [Native]		30	40	25	5
						1			Sandstone, brownish yellow (10YR 6/8), highly weathered, contains quartz, feldspar, and biotite grains [Chatsworth Formation] Total Depth = 0.5 ft; terminated due to refusal on bedrock.  Collected soil sample S001 at 14:07.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10





Boring ID: **B1BS0116**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797095.61</b>	Easting (ft): <b>269155.07</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-28-2010</b>	Start Time: <b>09:39</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-28-2010</b>	Finish Time: <b>09:45</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger and Slam Bar</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	
Comments: <b>In drainage, surface covered with dry, loose vegetation, partially charred</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>01-28-2010</b>	Backfill Time: <b>09:45</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.2		0		SM	Silty Sand, very dark brown (10YR 2/2) mottled with light yellowish brown (10YR 6/4), medium dense, moist, trace clay, trace rootlets [Native]	5	20	30	30	15
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock.  Collected soil sample S001 at 09:41.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0117**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797134.38</b>	Easting (ft): <b>269127.68</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>14:26</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>14:32</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>Sparsely vegetated surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>14:33</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SW	Well Graded Sand, yellowish brown (10YR 5/6), medium dense, moist, mica present [Native]		35	35	30	tr
						1			Sandstone, brownish yellow (10YR 6/6), highly weathered, contains quartz, feldspar, and biotite grains [Chatsworth Formation] Total Depth = 0.5 ft; terminated due to refusal on bedrock.  Collected soil sample S001 at 14:28.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0118**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797088.43</b>	Easting (ft): <b>269098.70</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>09:26</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>09:33</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>Fresh vegetation partially covering surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>09:33</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 5/3) mottled with light yellowish brown (10YR 6/4), medium dense, moist, contains vegetation debris [Native]	tr	20	40	30	10
						1			Sandstone, pale yellow (2.5Y 7/4), weathered, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 0.5 ft; terminated due to refusal on bedrock.  Collected soil sample S001 at 09:27.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0119**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797076.58</b>	Easting (ft): <b>269078.95</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>09:52</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>09:58</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>Grassy surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>09:58</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, very dark grayish brown (10YR 3/2), medium dense, moist, contains vegetation debris, mica [Native]	tr	10	40	35	15
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock.  Collected soil sample S001 at 09:53.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0120**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797064.01</b>	Easting (ft): <b>269107.31</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>12:54</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>13:00</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>On steep, moderately vegetated slope across from small pile of dead twigs</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>13:02</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			3.4		0		SP	Poorly Graded Sand, very dark gray (10YR 3/1) mottled with yellowish brown (10YR 5/4), medium dense, moist to locally wet, contains roots and rootlets [Native]	tr	30	50	15	5
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock.  Collected soil sample S001 at 12:57.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0121**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796955.94</b>	Easting (ft): <b>269092.59</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>13:17</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>13:24</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>Heavily vegetated area, water at surface about 5 ft down gradient</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>13:24</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP	Poorly Graded Sand, brown (10YR 4/3), medium dense, wet, mica present [Native]	tr	40	40	15	5
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 at 13:19. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0122**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797056.42</b>	Easting (ft): <b>269187.53</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-28-2010</b>	Start Time: <b>08:01</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-28-2010</b>	Finish Time: <b>08:09</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger and Slam Bar</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	
Comments: <b>Charred vegetation at surface, top 1 in. scraped away prior to sampling</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>01-28-2010</b>	Backfill Time: <b>08:09</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s			0.4		0		SW-SM	Well Graded Sand with Silt, dark brown (10YR 3/3), loose, moist, contains roots and rootlets [Native]	tr	30	30	30	10
						1			Sandstone, yellowish brown (10YR 5/8), highly weathered, contains quartz, feldspar, and biotite grains [Chatsworth Formation] Total Depth = 0.5 ft; terminated due to refusal on bedrock.  Collected soil sample S001 at 08:01.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0123**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796996.08</b>	Easting (ft): <b>269173.60</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>08:13</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>08:23</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	
Comments: <b>Hydromulched surface, top 1 in. scraped away prior to sampling</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>08:24</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.0		0		SM	Silty Sand, brown (10YR 4/3), medium dense, moist, mica present [Native]		15	30	40	15
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 at 08:15. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10





Boring ID: **B1BS0124**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797036.73</b>	Easting (ft): <b>269227.59</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>08:35</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>08:41</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	
Comments: <b>Burnt vegetation and rocks nearby, top 1-2 in. removed prior to sampling</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>08:41</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.0		0		SW-SM	Well Graded Sand with Silt, dark yellowish brown (10YR 4/4), medium dense, moist, trace vegetation debris [Native]	tr	30	40	20	10
						1			Sandstone, weathered [Chatsworth Formation] Total Depth = 0.5 ft; terminated due to refusal on bedrock.  Collected soil sample S001 at 08:36.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0125**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797111.41</b>	Easting (ft): <b>269015.04</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>13:41</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>13:48</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>Within small grassy drainage, water ponding at surface 2 ft down gradient</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>13:49</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s			0.0		0		SP	Poorly Graded Sand, very dark brown (10YR 2/2), medium dense, moist, contains rootlets, mica [Native]		20	40	35	5
						1			Sandstone, yellowish brown (10YR 5/8), weathered, contains quartz, feldspar, and abundant biotite grains [Chatsworth Formation] Total Depth = 0.5 ft; terminated due to refusal on bedrock.  Collected soil sample S001 at 13:43.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0126**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797151.98</b>	Easting (ft): <b>269040.89</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>10:16</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>10:24</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>Grassy surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>10:24</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.0		0		SW	Well Graded Sand, brown (10YR 4/3), medium dense, moist, mica present [Native]		30	30	35	5
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 at 10:18. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0127**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>3.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797051.92</b>	Easting (ft): <b>269156.58</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>02-09-2010</b>	Start Time: <b>09:10</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>02-09-2010</b>	Finish Time: <b>09:19</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments: <b>On steep slope devoid of vegetation</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>02-09-2010</b>	Backfill Time: <b>09:20</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand with Gravel, dark yellowish brown (10YR 4/4), loose, moist, possibly reworked soil	20	5	20	30	25
						3			Total Depth = 3.0 ft; terminated due to refusal on gravel or cobbles, not bedrock. Attempted two step-outs and met similar refusal at 2 to 3 ft.					
						4			Collected soil sample S001 at 09:11.					
						4			Backfilled with soil cuttings.					
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0128**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797088.69</b>	Easting (ft): <b>269222.63</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>02-09-2010</b>	Start Time: <b>09:26</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>02-09-2010</b>	Finish Time: <b>09:51</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>H. Hunley</b>	

Comments: <b>Bare soil with sparse grass at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>02-09-2010</b>	Backfill Time: <b>09:51</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.2	s			0.2		0		SM	Silty Sand, dark yellowish brown (10YR 4/4), medium dense, moist [Native]	10	15	20	30	25
						1			Sandstone [Chatsworth Formation] Total Depth = 1.0 ft; terminated due to refusal on bedrock. Attempted two step-outs, to west and to north of first boring; both met shallow refusal.  Collected soil sample S001 at 09:27.  Backfilled all borings with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0129**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797214.22</b>	Easting (ft): <b>269078.09</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>10:43</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>10:49</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>On grassy slope</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>10:49</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s			0.0		0		SP	Poorly Graded Sand, very dark brown (10YR 2/2) mottled with light yellowish brown (10YR 6/4), medium dense, moist, contains rootlets, mica [Native]	tr	20	40	35	5
						1			Sandstone, pale brown (10YR 6/3), weathered, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 0.5 ft; terminated due to refusal on bedrock.  Collected soil sample S001 at 10:45.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0130**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797205.86</b>	Easting (ft): <b>269008.76</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>01-27-2010</b>	Start Time: <b>11:11</b>	Logged By: <b>A. Ruotolo</b>	Reviewed By: <b>B. Martasin, P.G. #8356</b>
Drill Finish Date: <b>01-27-2010</b>	Finish Time: <b>11:17</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn / R. Cano</b>	

Comments: <b>In grassy area</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>01-27-2010</b>	Backfill Time: <b>11:17</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, very dark grayish brown (10YR 3/2), medium dense, moist, contains rootlets, mica [Native]	tr	30	40	20	10
						1			Sandstone, yellow (10YR 7/6), weathered, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 0.5 ft; terminated due to refusal on bedrock.  Collected soil sample S001 at 11:12.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 2/27/10



Boring ID: **B1BS0147**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796777.69</b>	Easting (ft): <b>269288.13</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>10:43</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>11:15</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>Gravel and sand in bottom of drainage</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>11:16</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, very dark grayish brown (10YR 3/2)					
0.5 - 1.0						1			Sandstone [Chatsworth Formation] Total Depth = 1.0 ft (fourth attempt); terminated due to refusal on bedrock. First attempt met refusal on concrete swale. Second attempt, 4 ft to north, encountered concrete swale on side of embankment. Third attempt, 4 ft to south, met shallow refusal on sandstone.					
						2			Collected soil sample S001 at 11:05. Backfilled all locations with soil cuttings.					
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10





Boring ID: **B1BS0148**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796762.30</b>	Easting (ft): <b>269260.85</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>11:27</b>	Logged By: <b>C. Nevison</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>11:45</b>	Drilling Contractor: <b>Jacob &amp; Hefner Assoc.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>Asphalt and concrete rip-rap on steep bank under 12-in. culvert pipe</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Grab from trowel retained 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>11:46</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.0		0		SM	Silty Sand, very dark grayish brown (10YR 3/2), loose, moist [Sediment]					
Total Depth = 0.5 ft; terminated due to refusal on rip-rap in culvert. Collected sediment sample S001 at 11:40. No backfill required.														
						1								
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0149**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.8</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797216.87</b>	Easting (ft): <b>269048.12</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>13:40</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>13:50</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>On slope above former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>13:50</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.8	s			0.0		0		SM	Silty Sand, very dark gray (10YR 3/1), loose, moist, no staining or odor [Alluvium/Colluvium]				60	40
						1			Silty Sandstone, brown (10YR 5/3), moist, weathered, moderately hard, friable [Chatsworth Formation] Total Depth = 0.8 ft; terminated due to refusal on bedrock.  Collected soil sample S001.  Backfilled with soil cuttings.			5	65	30
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0150**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797098.25</b>	Easting (ft): <b>268983.33</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>13:00</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>13:15</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>0.25</b> ▽	Date / Time: <b>03-02-2010 13:15</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	
Comments: <b>On slope above former building pad, bare soil surface</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>13:15</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.25	S				▽	0		SP-SM	Poorly Graded Sand with Silt, very dark gray (10YR 3/1), loose, wet, no staining or odor [Alluvium/Colluvium]			10	80	10
						1			Total Depth = 0.5 ft; terminated due to standing water in boring.  Collected soil sample S001.  Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0151**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>2.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797078.14</b>	Easting (ft): <b>268951.07</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>13:15</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>13:40</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>N/A</b>
Depth 1st H <sub>2</sub> O (ft): <b>2.5</b> ▽	Date / Time: <b>03-02-2010 13:40</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>On slope above former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>13:40</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
0 - 0.5	S					0		SM	Silty Sand, very dark gray (10YR 3/1), loose, moist to wet, no staining or odor [Alluvium/Colluvium]				70	30	
						1									
						2									
						2.5			← water seepage into boring						
						3			Total Depth = 2.5 ft; terminated due to standing water in boring.						
						3.1			Collected soil sample S001.						
						3.2			Backfilled with soil cuttings.						
						4									
						5									
						6									
						7									
						8									
						9									
						10									

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0152**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>2.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797083.42</b>	Easting (ft): <b>269045.64</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>11:00</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>NR</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>On slope above former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>NR</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, very dark gray (10YR 3/1), medium dense, moist, no staining or odor [Alluvium/Colluvium]			5	80	15
						2.5			Silty Sandstone, pale brown (10YR 6/3), moist, weathered, moderately hard, friable [Chatsworth Formation] Total Depth = 2.5 ft; terminated due to refusal on bedrock.			10	60	30
						3.0			Collected soil sample S001. Backfilled with soil cuttings.					
						4.0								
						5.0								
						6.0								
						7.0								
						8.0								
						9.0								
						10.0								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0153**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1797017.23</b>	Easting (ft): <b>269152.06</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>10:30</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>10:37</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>On slope above former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>10:37</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s			0.0		0		SM	Silty Sand, dark grayish brown (10YR 4/2), loose, moist, no staining or odor [Alluvium/Colluvium]			5	60	35
						0.5			Silty Sandstone, brown (10YR 5/3), moist, weathered, hard, friable [Chatsworth Formation]			10	60	30
						1			Total Depth = 0.5 ft; terminated due to refusal on bedrock.					
						1.1			Collected soil sample S001.					
						1.2			Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0154**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>3.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796977.83</b>	Easting (ft): <b>269125.92</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>10:00</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>10:20</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>3 ▽</b>	Date / Time: <b>03-02-2010 10:20</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>On slope above former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>10:20</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SC	Clayey Sand, dark brown (7.5YR 3/2), medium dense, moist, no staining or odor [Native?]				65	35
					▽	3			← water seepage into boring Total Depth = 3.0 ft; terminated due to standing water in boring. Collected soil sample S001. Backfilled with soil cuttings.					
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0155**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>0.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796961.02</b>	Easting (ft): <b>269054.65</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>10:37</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>10:50</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>On slope above former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>10:50</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s			0.0		0		SM	Silty Sand, dark grayish brown (10YR 4/2), loose, moist, no staining or odor [Alluvium/Colluvium]			10	60	30
						0.5			Silty Sandstone, brown (10YR 4/3), moist, weathered, moderately hard, friable [Chatsworth Formation]			10	60	30
						1			Total Depth = 0.5 ft; terminated due to refusal on bedrock.					
						1.1			Collected soil sample S001.					
						1.2			Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10





Boring ID: **B1BS0156**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796928.60</b>	Easting (ft): <b>269135.15</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>09:40</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>10:00</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Within former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>10:00</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, brown (7.5YR 4/3), dense, moist to wet, no staining or odor [Fill]				60	40
4.5 - 5.0	s			0.0		5			becomes brown (7.5YR 4/4), moist, increase in sand content				70	30
Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 and S002. Backfilled with soil cuttings.														

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0156A**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>4.0</b>	Project: <b>ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property</b>	
Northing (ft): <b>269147.85</b>	Easting (ft): <b>1796919.62</b>	Job Number: <b>1008208</b>	Site: <b>B1-2</b>
Drill Start Date: <b>10-13-2010</b>	Start Time: <b>08:15</b>	Logged By: <b>J. Parkes</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>10-13-2010</b>	Finish Time: <b>08:35</b>	Drilling Contractor: <b>MP Environmental Svcs.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Grab (hand sampling)</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>R. Luna</b>	

Comments: <b>Trench ISRA-B1-2 sidewall location</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Samples retained in 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>10-13-2010</b>	Backfill Time: <b>08:40</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, dark yellowish brown (10YR 4/4), moist			20	60	20
2.5 - 3.0	s			0.0		3		SP-SM	Poorly Graded Sand with Silt, yellowish brown (10YR 5/4), moist			20	70	10
Total Depth = 4.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 08:25 and S002 at 08:35. Backfilled with auger cuttings.														

LOG OF BORING: OUTFALL009\_ISRA-2010.GPJ\_BOEING.GDT 3/25/11



Boring ID: **B1BS0156B**

Borehole Diam. (in.): <b>2</b>	Total Depth (ft): <b>0.5</b>	Project: <b>ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property</b>	
Northing (ft): <b>269147.85</b>	Easting (ft): <b>1796919.62</b>	Job Number: <b>1008208</b>	Site: <b>B1-2</b>
Drill Start Date: <b>11-15-2010</b>	Start Time: <b>09:16</b>	Logged By: <b>S. Aichner</b>	Reviewed By: <b>M. Milman-Barris, P.G.</b>
Drill Finish Date: <b>11-15-2010</b>	Finish Time: <b>09:23</b>	Drilling Contractor: <b>MP Environmental Svcs.</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Grab (hand sampling)</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>A. Vann</b>	

Comments: <b>Trench ISRA-B1-2 sidewall location</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>Sample retained in 6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>N/A</b>	Backfill Time: <b>N/A</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.2		0		SM	Silty Sand, yellowish brown (10YR 5/6), loose to medium dense, dry, micaceous			10	70	20
Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 at 09:23. Backfilled with soil cuttings.														
						1								
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009\_ISRA-2010.GPJ BOEING.GDT 3/25/11



Boring ID: **B1BS0157**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796941.57</b>	Easting (ft): <b>269113.00</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>09:10</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>09:40</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Within former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>09:40</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, brown (7.5YR 4/3), dense, moist to wet, no staining or odor [Fill]				60	40
4.5 - 5.0	s			0.0		5			becomes brown (7.5YR 4/4), moist, increase in sand content				70	30
Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 and S002. Backfilled with soil cuttings.														

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0158**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796916.71</b>	Easting (ft): <b>269108.68</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>08:15</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>08:50</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Within former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>08:50</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s	0.1				0		SM	Silty Sand, dark yellowish brown (10YR 4/4), dense, moist, no staining or odor [Fill]			tr	65	35
0.1 - 0.5	s	0.0				1								
0.5 - 1.0	s	0.0				2								
1.0 - 1.5	s	0.0				3								
1.5 - 2.0	s	0.0				4								
2.0 - 2.5	s	0.0				5			becomes brown (7.5YR 4/4), slight increase in sand content			tr	70	30
2.5 - 5.0	s	0.0				6			Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 and S002. Backfilled with soil cuttings.					
5.0 - 5.5	s	0.0				7								
5.5 - 6.0	s	0.0				8								
6.0 - 6.5	s	0.0				9								
6.5 - 7.0	s	0.0				10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0159**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796900.50</b>	Easting (ft): <b>269089.23</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (South - Dioxins)</b>
Drill Start Date: <b>03-02-2010</b>	Start Time: <b>08:50</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-02-2010</b>	Finish Time: <b>09:10</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Within former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-02-2010</b>	Backfill Time: <b>09:10</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, brown (10YR 4/3), dense, moist, no staining or odor [Fill]			5	60	35
4.5 - 5.0	s					5			becomes brown (7.5YR 4/3), sand grades slightly finer				65	35
						5			Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 and S002. Backfilled with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0160**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>4.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796871.65</b>	Easting (ft): <b>269291.62</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-03-2010</b>	Start Time: <b>12:15</b>	Logged By: <b>B. Martasin, P.G.</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-03-2010</b>	Finish Time: <b>12:25</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Bare soil at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-03-2010</b>	Backfill Time: <b>12:28</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			1.3		0		SM	Silty Sand, dark brown (7.5YR 3/2), loose, moist, gravel-size sandstone fragments, contains rootlets [Native]	10	10	15	35	30
2.5 - 3.0	s			3.3		3			↙ decrease in sandstone fragments, increase in fines content	5	5	10	40	40
4.0 - 4.0						4			Sandstone, weathered, slightly friable [Chatsworth Formation] Total Depth = 4.0 ft; terminated due to refusal on bedrock. Collected soil samples S001 at 12:18 and S002 at 12:25. Backfilled with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0161**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796818.02</b>	Easting (ft): <b>269351.54</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-03-2010</b>	Start Time: <b>12:42</b>	Logged By: <b>B. Martasin, P.G.</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-03-2010</b>	Finish Time: <b>12:55</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Vegetation at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-03-2010</b>	Backfill Time: <b>12:58</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			1.7		0		SM	Silty Sand, dark brown (7.5YR 3/2), loose, moist, micaceous, contains rootlets [Native]			10	60	30
4.5 - 5.0	s			1.4		5			becomes yellowish brown (10YR 5/4), sand grades finer, micaceous, no rootlets				70	30
Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 12:45 and S002 at 12:55. Backfilled with soil cuttings.														

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10





Boring ID: **B1BS0162**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>2.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796869.86</b>	Easting (ft): <b>269331.31</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>08:45</b>	Logged By: <b>V. Vathanasin, P.G.</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>09:09</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	
Comments: <b>Leaves and organic debris at surface</b>		Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>		Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>09:10</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, brown (10YR 4/3), loose, moist, contains roots, no visible staining or odor [Native]			10	55	35
						2.5			Sandstone, weathered [Chatsworth Formation] Total Depth = 2.5 ft; terminated due to refusal on bedrock. Stepped out twice and met refusal at 2.5 ft at both locations.  Collected soil sample S001 at 08:49.  Backfilled all locations with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0163**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796853.87</b>	Easting (ft): <b>269321.51</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>09:11</b>	Logged By: <b>V. Vathanasin, P.G.</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>09:20</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>Leaves on surface of steep northwest-facing slope</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>09:21</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand, brown (10YR 4/3), loose, moist, contains roots, no staining or odor [Native]			5	60	35
						1.5			Sandstone, weathered [Chatsworth Formation] Total Depth = 1.5 ft; terminated due to refusal on bedrock. Stepped out twice and met refusal at 1.5 ft at both locations. Collected soil sample S001 at 09:11. Backfilled all locations with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0164**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>2.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796864.84</b>	Easting (ft): <b>269310.22</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>09:28</b>	Logged By: <b>V. Vathanasin, P.G.</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>09:45</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>Leaves and roots on surface of steep northwest-facing slope</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>09:46</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, brown (10YR 5/3), loose, moist, contains roots, no staining or odor [Native]		tr	5	65	30
						2			Sandstone, weathered [Chatsworth Formation] Total Depth = 2.0 ft; terminated due to refusal on bedrock. Stepped out twice and met refusal at 2 ft at both locations.  Collected soil sample S001 at 09:28.  Backfilled all locations with soil cuttings.					
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0165**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>2.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796873.58</b>	Easting (ft): <b>269295.97</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>09:45</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>09:50</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Within former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>09:50</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand, dark grayish brown (10YR 4/2), medium dense, moist, contains asphalt debris, no staining or odor [Fill]				70	30
						2			Silty Sandstone, brown (10YR 4/3), moist, weathered, moderately hard, friable [Chatsworth Formation] Total Depth = 2.0 ft; terminated due to refusal on bedrock.  Collected soil sample S001.  Backfilled with soil cuttings.				80	20
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0166**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>3.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796828.39</b>	Easting (ft): <b>269290.43</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>09:50</b>	Logged By: <b>V. Vathanasin, P.G.</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>10:06</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>Heavily vegetated surface under oak tree on steep northwest-facing slope</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>10:07</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand, yellowish brown (10YR 5/4), loose, moist, no staining or odor [Native]			15	65	20
						3			Sandstone, weathered [Chatsworth Formation] Total Depth = 3.0 ft; terminated due to refusal on bedrock. Stepped out twice and met refusal at 3 ft at both locations.  Collected soil sample S001 at 09:59.  Backfilled all locations with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0167**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796802.47</b>	Easting (ft): <b>269296.00</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>10:14</b>	Logged By: <b>V. Vathanasin, P.G.</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>10:30</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>On area of steep northwest-facing slope overgrown with brush</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>10:31</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SP-SM	Poorly Graded Sand with Silt, dark yellowish brown (10YR 4/4), loose, moist, contains roots, no staining or odor [Native]		tr	20	70	10
						1.5			Sandstone, weathered [Chatsworth Formation] Total Depth = 1.5 ft; terminated due to refusal on bedrock. Stepped out twice and met refusal at 1.5 ft at both locations. Collected soil sample S001 at 10:16. Backfilled all locations with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0168**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>2.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796848.19</b>	Easting (ft): <b>269278.76</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>09:55</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>10:05</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Within former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>10:05</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.4	s			0.4		0		SM	Silty Sand, very dark gray (10YR 3/1), medium dense, moist, no staining or odor [Fill]				65	35
						2			Silty Sandstone, brown (10YR 4/3), moist, moderately weathered, moderately hard, friable [Chatsworth Formation] Total Depth = 2.0 ft; terminated due to refusal on bedrock.  Collected soil sample S001.  Backfilled with soil cuttings.				80	20
						10								

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0169**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796811.06</b>	Easting (ft): <b>269256.13</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>10:15</b>	Logged By: <b>J. Wokurka</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>10:25</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>M. Hoehn</b>	

Comments: <b>Within former building pad, bare soil surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>10:25</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s	0.5				0		SM	Silty Sand, brown (10YR 4/3), medium dense, moist, subrounded grains, no staining or odor [Fill]			15	55	30
0.5 - 5.0	s	0.2				5			becomes brown (10YR 5/3), dense, increase in sand content			20	60	20
Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 and S002. Backfilled with soil cuttings.														

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10





Boring ID: **B1BS0170**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>5.0</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796794.45</b>	Easting (ft): <b>269254.72</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>10:45</b>	Logged By: <b>V. Vathanasin, P.G.</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>10:50</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>On completely overgrown area of steep northwest-facing slope</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>11:00</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s	0.0				0		SM	Silty Sand, dark yellowish brown (10YR 4/4), loose, moist, no staining or odor [Native]			10	75	15
0.1 - 0.2	s	0.1				4		SP-SM	Poorly Graded Sand with Silt, yellowish brown (10YR 5/4), loose, moist, no staining or odor [Native]	tr	tr	25	65	10
						5			Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 10:45 and S002 at 10:50. Backfilled with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10



Boring ID: **B1BS0171**

Borehole Diam. (in.): <b>3</b>	Total Depth (ft): <b>1.5</b>	Project: <b>SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)</b>	
Northing (ft): <b>1796773.82</b>	Easting (ft): <b>269246.13</b>	Job Number: <b>1008208</b>	Site: <b>B1-1 (North)</b>
Drill Start Date: <b>03-09-2010</b>	Start Time: <b>11:25</b>	Logged By: <b>V. Vathanasin, P.G.</b>	Reviewed By: <b>C. Carter, P.G.</b>
Drill Finish Date: <b>03-09-2010</b>	Finish Time: <b>11:40</b>	Drilling Contractor: <b>B.L. Hall</b>	Field Instrumentation: <b>PID</b>
Depth 1st H <sub>2</sub> O (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Drill Rig Type/Method: <b>Hand Auger</b>	
Depth H <sub>2</sub> O After Drilling (ft): <b>N/A</b>	Date / Time: <b>N/A</b>	Driller's Name: <b>K. Dubberke</b>	

Comments: <b>Thick brush at surface</b>	Well Comp. Date: <b>N/A</b>	Completion Time: <b>N/A</b>
Samplers: <b>6-inch stainless steel sleeve</b>	Soil Backfill Date: <b>03-09-2010</b>	Backfill Time: <b>11:41</b>

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand, brown (10YR 4/3), loose, moist, contains roots and few burnt twigs, no staining or odor [Native]	tr			65	35
						1.5			Sandstone, weathered [Chatsworth Formation] Total Depth = 1.5 ft; terminated due to refusal on bedrock. Stepped out twice and met refusal at 1.5 ft at both locations. Collected soil sample S001 at 11:35. Backfilled all locations with soil cuttings.					

LOG OF BORING - OUTFALL009-2010.GPJ BOEING.GDT 3/28/10