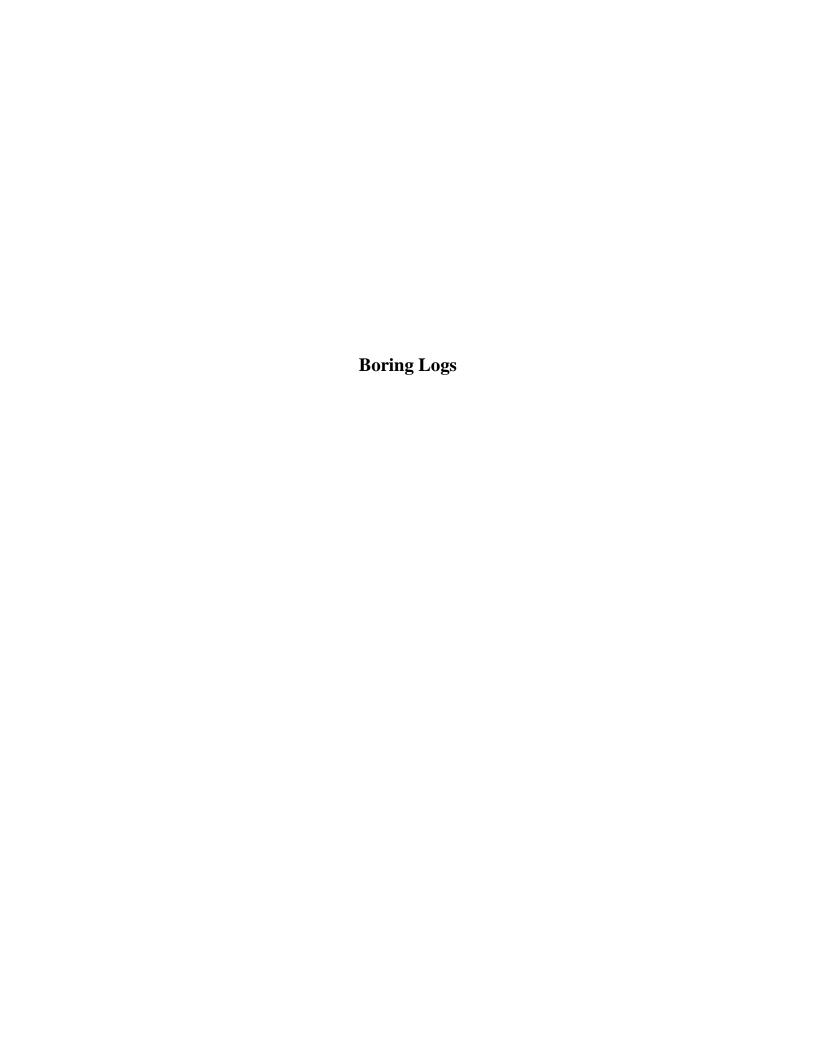
Appendix D Boring and Trench Logs



Object ID	Outfall	ISRA Area	Туре	Date Sample Collected or Trench Log Created
A2BS1074	009	A2LF-1	Data Gap	4/2/2009
A2BS1075	009	A2LF-1	Data Gap	4/2/2009
A2BS1076	009	A2LF-1	Data Gap	4/2/2009
A2BS1077	009	A2LF-1	Data Gap	4/2/2009
A2BS1088	009	A2LF-3	Data Gap	4/3/2009
A2BS1089	009	A2LF-3	Data Gap	4/2/2009
A2BS1090	009	A2LF-3	Data Gap	4/2/2009
A2BS1091	009	A2LF-3	Data Gap	4/3/2009
A2BS1092	009	A2LF-3	Data Gap	4/2/2009
A2BS1093	009	A2LF-1	Data Gap	6/16/2009
A2BS1095	009	A2LF-3	Data Gap	6/16/2009
A2BS1096	009	A2LF-3	Data Gap	6/16/2009
A2ET0100	009	PEA-A2LF-1	Confirmation	11/10/2009
A2ET0101	009	PEA-A2LF-1	Confirmation	11/10/2009
A2ET0102	009	PEA-A2LF-1	Confirmation	11/10/2009
A2ET0200	009	PEA-A2LF-3	Confirmation	11/16/2009
A2ET0201	009	PEA-A2LF-3	Confirmation	11/16/2009
A2ET0202	009	PEA-A2LF-3	Confirmation	11/16/2009
A2ET0203	009	PEA-A2LF-3	Confirmation	11/16/2009
CNBS0128	008	CYN-1	Data Gap	2/25/2009
CNBS0129	008	CYN-1	Data Gap	2/25/2009
CNBS0130	800	unaffiliated	Data Gap	2/25/2009
CNBS0131	800	CYN-1	Data Gap	4/9/2009
CNBS0132	800	CYN-1	Data Gap	2/25/2009
CNBS0133	008	CYN-1	Data Gap	2/25/2009
CNBS0134	800	CYN-1	Data Gap	2/25/2009
CNBS0135	800	CYN-1	Data Gap	7/1/2009
CNBS0136	008	CYN-1	Data Gap	7/1/2009
CNBS0137	800	CYN-1	Data Gap	8/24/2009
CNBS0138	800	CYN-1	Data Gap	8/24/2009
CNET0100	008	CYN-1	Confirmation	9/23/2009
HVBF33	008	HVS-2A	Data Gap	10/4/2006
HVBF33A	800	HVS-2A	Data Gap	10/1/2009
HZBS0062	800	HVS-1	Data Gap	2/24/2009
HZBS0063	800	HVS-1	Data Gap	2/24/2009
HZBS0064	800	HVS-1	Data Gap	2/24/2009
HZBS0065	800	HVS-1	Data Gap	2/24/2009
HZBS0067	800	unaffiliated	Data Gap	2/24/2009
HZBS0068	800	HVS-2C	Data Gap	2/25/2009
HZBS0069	800	HVS-2C	Data Gap	2/25/2009
HZBS0070	800	HVS-2C	Data Gap	2/24/2009
HZBS0071	800	HVS-2C	Data Gap	2/25/2009
HZBS0072	008	HVS-2A	Data Gap	2/25/2009

Object ID	Outfall	ISRA Area	Туре	Date Sample Collected or Trench Log Created
HZBS0073	008	HVS-2A	Data Gap	2/24/2009
HZBS0073A	008	HVS-2A	Data Gap	3/20/2009
HZBS0074	008	HVS-2A	Data Gap	2/25/2009
HZBS0075	008	HVS-2A	Data Gap	2/25/2009
HZBS0076	008	HVS-2A	Data Gap	2/25/2009
HZBS0077	008	HVS-2A	Data Gap	2/25/2009
HZBS0078	008	HVS-2A	Data Gap	2/25/2009
HZBS0079	008	HVS-2A	Data Gap	2/24/2009
HZBS0079A	008	HVS-2A	Data Gap	3/20/2009
HZBS0080	008	HVS-2A	Data Gap	2/25/2009
HZBS0080A	008	HVS-2A	Data Gap	10/1/2009
HZBS0081	008	HVS-2A	Data Gap	2/25/2009
HZBS0081A	008	HVS-2A	Data Gap	9/30/2009
HZBS0082	008	HVS-2A	Data Gap	2/25/2009
HZBS0082A	008	HVS-2A	Data Gap	10/1/2009
HZBS0083	008	unaffiliated	Data Gap	2/25/2009
HZBS0084	008	HVS-2A	Data Gap	2/25/2009
HZBS0084A	008	HVS-2A	Data Gap	10/1/2009
HZBS0085	008	HVS-2A	Data Gap	2/25/2009
HZBS0086	008	HVS-2B-1	Data Gap	2/24/2009
HZBS0087	008	HVS-2B-2	Data Gap	2/24/2009
HZBS0088	008	HVS-2B-1	Data Gap	2/24/2009
HZBS0089	008	HVS-1	Data Gap	2/24/2009
HZBS0090	008	unaffiliated	Data Gap	2/24/2009
HZBS0091	008	HVS-1	Data Gap	2/24/2009
HZBS0092	008	HVS-2A	Data Gap	2/25/2009
HZBS0093	008	HVS-2B-2	Data Gap	2/24/2009
HZBS0094	008	HVS-2B-2	Data Gap	2/24/2009
HZBS0095	008	HVS-2B-1	Data Gap	2/24/2009
HZBS0096	008	HVS-2A	Data Gap	2/25/2009
HZBS0097	008	HVS-2A	Data Gap	2/25/2009
HZBS0098	008	unaffiliated	Data Gap	3/20/2009
HZBS0099	008	HVS-3	Data Gap	3/20/2009
HZBS0100	008	unaffiliated	Data Gap	3/20/2009
HZBS0101	008	unaffiliated	Data Gap	3/20/2009
HZBS0102	008	unaffiliated	Data Gap	3/20/2009
HZBS0103	008	unaffiliated	Data Gap	3/20/2009
HZBS0104	008	DRG-1	Data Gap	3/20/2009
HZBS0105	008	HVS-3	Data Gap	4/9/2009
HZBS0106	008	HVS-3	Data Gap	4/9/2009
HZBS0107	008	HVS-3	Data Gap	4/9/2009
HZBS0108	008	HVS-4	Data Gap	4/9/2009
HZBS0109	008	HVS-4	Data Gap	6/1/2009

Object ID	Outfall	ISRA Area	Туре	Date Sample Collected or Trench Log Created
HZBS0110	008	HVS-3	Data Gap	6/1/2009
HZBS0111	008	HVS-1	Data Gap	6/1/2009
HZBS0112	008	HVS-3	Data Gap	6/1/2009
HZBS0113	008	HVS-2C	Data Gap	6/1/2009
HZBS0114	008	HVS-1	Data Gap	6/1/2009
HZBS0115	008	HVS-4	Data Gap	6/1/2009
HZBS0116	008	HVS-1	Data Gap	6/1/2009
HZBS0117	008	HVS-1	Data Gap	6/1/2009
HZBS0118	008	HVS-1	Data Gap	6/1/2009
HZBS0119	008	unaffiliated	Data Gap	6/1/2009
HZBS0120	008	unaffiliated	Data Gap	6/1/2009
HZBS0121	008	unaffiliated	Data Gap	6/1/2009
HZBS0122	008	unaffiliated	Data Gap	6/1/2009
HZBS0123	008	HVS-2A	Data Gap	6/1/2009
HZBS0123A	008	HVS-2A	Data Gap	10/1/2009
HZBS0124	008	HVS-2A	Data Gap	6/1/2009
HZBS0124A	008	HVS-2A	Data Gap	10/1/2009
HZBS0125	008	HVS-4	Data Gap	6/30/2009
HZBS0126	008	HVS-4	Data Gap	6/30/2009
HZBS0127	008	HVS-3	Data Gap	6/30/2009
HZBS0128	008	HVS-3	Data Gap	6/30/2009
HZBS0129	008	HVS-2A	Data Gap	7/14/2009
HZBS0130	008	HVS-2A	Data Gap	7/14/2009
HZBS0131	008	HVS-2A	Data Gap	7/14/2009
HZBS0132	008	HVS-2A	Data Gap	7/14/2009
HZBS0133	800	HVS-2A	Data Gap	7/14/2009
HZBS0134	008	HVS-2A	Data Gap	7/14/2009
HZBS0135	008	HVS-2A	Data Gap	7/14/2009
HZBS0136	008	HVS-2A	Data Gap	7/14/2009
HZBS0137	800	HVS-2A	Data Gap	7/14/2009
HZBS0138	800	HVS-2A	Data Gap	7/14/2009
HZBS0139	800	HVS-2A	Data Gap	7/14/2009
HZBS0140	800	HVS-2A	Data Gap	7/14/2009
HZBS0141	800	HVS-2A	Data Gap	7/14/2009
HZBS0142	800	HVS-2A	Data Gap	7/14/2009
HZBS0143	008	HVS-2A	Data Gap	7/14/2009
HZBS0144	008	HVS-2B-1	Data Gap	7/14/2009
HZBS0145	008	HVS-2C	Data Gap	7/14/2009
HZBS0146	800	HVS-2B-2	Data Gap	7/15/2009
HZBS0147	008	HVS-2B-2	Data Gap	7/15/2009
HZBS0148	800	HVS-2B-2	Data Gap	7/15/2009
HZBS0149	008	HVS-3	Data Gap	7/15/2009
HZBS0150	008	HVS-2A	Data Gap	7/15/2009

Object ID Outfall		bject ID Outfall ISRA Area		Date Sample Collected or Trench Log Created
HZBS0151	008	HVS-3	Data Gap	7/21/2009
HZBS0152	800	HVS-1	Data Gap	7/1/2009
HZBS0153	008	HVS-1	Data Gap	7/1/2009
HZBS0154	800	HVS-2C	Data Gap	7/1/2009
HZBS0155	800	HVS-2C	Data Gap	7/1/2009
HZBS0156	800	HVS-2C	Data Gap	7/1/2009
HZBS0157	800	HVS-2C	Data Gap	7/1/2009
HZBS0158	800	HVS-2A	Data Gap	7/1/2009
HZBS0159	800	HVS-2A	Data Gap	7/1/2009
HZBS0160	800	HVS-2A	Data Gap	7/1/2009
HZBS0161	800	HVS-2A	Data Gap	7/1/2009
HZBS0162	800	HVS-2A	Data Gap	7/1/2009
HZBS0163	800	HVS-2A	Data Gap	7/1/2009
HZBS0164	800	HVS-2A	Data Gap	7/1/2009
HZBS0165	008	HVS-2B-2	Data Gap	7/1/2009
HZBS0166	800	HVS-2B-1	Data Gap	7/1/2009
HZBS0167	008	HVS-2B-1	Data Gap	7/1/2009
HZBS0168	008	HVS-2B-1	Data Gap	7/1/2009
HZBS0169	008	HVS-2B-1	Data Gap	7/1/2009
HZBS0170	800	HVS-2B-1	Data Gap	7/1/2009
HZBS0171	800	HVS-2B-1	Data Gap	7/1/2009
HZBS0172	800	HVS-2B-1	Data Gap	7/1/2009
HZBS0173	800	HVS-2A	Data Gap	8/20/2009
HZBS0174	800	HVS-2A	Data Gap	8/20/2009
HZBS0175	800	HVS-2A	Data Gap	10/1/2009
HZBS0177	800	HVS-2A	Data Gap	10/1/2009
HZBS0178	800	HVS-2A	Data Gap	9/30/2009
HZBS0179	800	HVS-2A	Data Gap	9/30/2009
HZBS0180	800	HVS-2A	Data Gap	10/1/2009
HZBS0181	008	Soil Borrow Area	Data Gap	10/27/2009
HZBS0182	008	Soil Borrow Area	Data Gap	10/27/2009
HZBS0183	800	Soil Borrow Area	Data Gap	10/27/2009
HZBS0184	008	Soil Borrow Area	Data Gap	10/27/2009
HZBS0185	800	Soil Borrow Area	Data Gap	10/27/2009
HZET0100	800	HVS-1	Confirmation	9/21/2009
HZET0101	008	HVS-1	Confirmation	9/21/2009
HZET0102	008	HVS-1	Confirmation	9/21/2009
HZET0103	008	HVS-1	Confirmation	9/21/2009
HZET0104	008	HVS-1	Confirmation	9/29/2009
HZET0105	008	HVS-1	Confirmation	9/29/2009
HZET0200	008	HVS-2A	Confirmation	9/10/2009
HZET0201	008	HVS-2A	Confirmation	9/10/2009
HZET0202	008	HVS-2A	Confirmation	9/10/2009

Object ID	Outfall	ISRA Area	Туре	Date Sample Collected or Trench Log Created
HZET0203	008	HVS-2A	Confirmation	9/10/2009
HZET0204	008	HVS-2A	Confirmation	9/10/2009
HZET0205	008	HVS-2A	Confirmation	9/10/2009
HZET0206	008	HVS-2A	Confirmation	9/10/2009
HZET0207	008	HVS-2A	Confirmation	9/10/2009
HZET0208	008	HVS-2A	Confirmation	9/10/2009
HZET0209	008	HVS-2A	Confirmation	9/10/2009
HZET0210	008	HVS-2A	Confirmation	9/10/2009
HZET0211	008	HVS-2A	Confirmation	9/10/2009
HZET0212	008	HVS-2A	Confirmation	9/10/2009
HZET0213	008	HVS-2A	Confirmation	9/14/2009
HZET0214	008	HVS-2A	Confirmation	9/14/2009
HZET0215	008	HVS-2A	Confirmation	9/14/2009
HZET0216	008	HVS-2A	Confirmation	9/14/2009
HZET0217	008	HVS-2A	Confirmation	9/14/2009
HZET0218	008	HVS-2A	Confirmation	9/14/2009
HZET0219	008	HVS-2A	Confirmation	9/14/2009
HZET0220	008	HVS-2A	Confirmation	9/14/2009
HZET0221	008	HVS-2A	Confirmation	9/15/2009
HZET0222	008	HVS-2A	Confirmation	9/15/2009
HZET0223	008	HVS-2A	Confirmation	9/15/2009
HZET0224	008	HVS-2A	Confirmation	9/15/2009
HZET0225	008	HVS-2A	Confirmation	9/15/2009
HZET0226	008	HVS-2A	Confirmation	9/15/2009
HZET0227	008	HVS-2A	Confirmation	9/15/2009
HZET0228	008	HVS-2A	Confirmation	9/15/2009
HZET0229	008	HVS-2A	Confirmation	9/15/2009
HZET0230	008	HVS-2A	Confirmation	9/29/2009
HZET0231	008	HVS-2A	Confirmation	9/29/2009
HZET0232	008	HVS-2A	Confirmation	9/29/2009
HZET0233	008	HVS-2A	Confirmation	9/29/2009
HZET0234	008	HVS-2A	Confirmation	9/29/2009
HZET0235	008	HVS-2A	Confirmation	9/29/2009
HZET0236	008	HVS-2A	Confirmation	9/29/2009
HZET0237	008	HVS-2A	Confirmation	10/5/2009
HZET0238	008	HVS-2A	Confirmation	10/5/2009
HZET0239	008	HVS-2A	Confirmation	10/5/2009
HZET0240	008	HVS-2A	Confirmation	10/5/2009
HZET0241	008	HVS-2A	Confirmation	10/5/2009
HZET0242	008	HVS-2A	Confirmation	10/6/2009
HZET0300	008	HVS-2B-1	Confirmation	9/1/2009
HZET0301	008	HVS-2B-1	Confirmation	9/1/2009
HZET0302	008	HVS-2B-1	Confirmation	9/15/2009

Object ID	Outfall	ISRA Area	Туре	Date Sample Collected or Trench Log Created
HZET0303	008	HVS-2B-1	Confirmation	9/15/2009
HZET0304	008	HVS-2B-1	Confirmation	9/29/2009
HZET0305	008	HVS-2B-1	Confirmation	9/29/2009
HZET0500	008	HVS-2B-2	Confirmation	9/3/2009
HZET0501	008	HVS-2B-2	Confirmation	9/3/2009
HZET0502	008	HVS-2B-2	Confirmation	9/3/2009
HZET0503	008	HVS-2B-2	Confirmation	9/3/2009
HZET0504	008	HVS-2B-2	Confirmation	9/3/2009
HZET0505	008	HVS-2B-2	Confirmation	9/3/2009
HZET0506	008	HVS-2B-2	Confirmation	9/3/2009
HZET0507	008	HVS-2B-2	Confirmation	9/3/2009
HZET0508	008	HVS-2B-2	Confirmation	9/29/2009
HZET0600	008	HVS-2C	Confirmation	9/21/2009
HZET0601	008	HVS-2C	Confirmation	9/21/2009
HZET0602	008	HVS-2C	Confirmation	9/21/2009
HZET0603	008	HVS-2C	Confirmation	9/21/2009
HZET0604	008	HVS-2C	Confirmation	9/21/2009
HZET0605	008	HVS-2C	Confirmation	9/21/2009
HZET0700	008	HVS-3	Confirmation	9/24/2009
HZET0701	008	HVS-3	Confirmation	9/24/2009
HZET0702	008	HVS-3	Confirmation	9/24/2009
HZET0703	800	HVS-3	Confirmation	9/24/2009
HZET0704	008	HVS-3	Confirmation	9/24/2009
HZET0705	008	HVS-3	Confirmation	9/24/2009
HZET0706	008	HVS-3	Confirmation	9/24/2009
HZET0707	008	HVS-3	Confirmation	9/24/2009
HZET0708	008	HVS-3	Confirmation	9/24/2009
HZET0709	008	HVS-3	Confirmation	9/24/2009
HZET0710	008	HVS-3	Confirmation	9/25/2009
HZET0711	008	HVS-3	Confirmation	9/24/2009
HZET0712	008	HVS-3	Confirmation	9/24/2009
HZET0713	008	HVS-3	Confirmation	9/24/2009
HZET0714	008	HVS-3	Confirmation	9/24/2009
HZET0715	008	HVS-3	Confirmation	9/24/2009
HZET0716	008	HVS-3	Confirmation	9/24/2009
HZET0717	008	HVS-3	Confirmation	9/25/2009
HZET0718	008	HVS-3	Confirmation	9/30/2009
HZET0719	008	HVS-3	Confirmation	9/30/2009
HZET0720	008	HVS-3	Confirmation	9/30/2009
HZET0721	008	HVS-3	Confirmation	9/30/2009
HZET0722	008	HVS-3	Confirmation	9/30/2009
HZET0723	008	HVS-3	Confirmation	9/30/2009
HZET0724	008	HVS-3	Confirmation	9/30/2009

Object ID	Outfall	ISRA Area	Туре	Date Sample Collected or Trench Log Created
HZET0725	800	HVS-3	Confirmation	9/30/2009
HZET0726	800	HVS-3	Confirmation	10/19/2009
HZET0727	800	HVS-3	Confirmation	10/19/2009
HZET0728	800	HVS-3/Septic tank	Confirmation	10/29/2009
HZET0729	800	HVS-3/Septic tank	Confirmation	10/29/2009
HZET0730	800	HVS-3/Septic tank	Confirmation	10/29/2009
HZET0731	008	HVS-3/Septic tank	Confirmation	10/29/2009
HZET0800	800	HVS-4	Confirmation	9/23/2009
HZET0801	800	HVS-4	Confirmation	9/23/2009
HZET0802	800	HVS-4	Confirmation	9/23/2009
HZET0803	800	HVS-4	Confirmation	9/23/2009
HZET0804	800	HVS-4	Confirmation	9/23/2009
HZET0805	800	HVS-4	Confirmation	9/23/2009
HZET0806	008	HVS-4	Confirmation	9/23/2009
HZET0808	800	HVS-4	Confirmation	9/29/2009
HZET0900	800	DRG-1	Confirmation	8/26/2009
HZET0901	800	DRG-1	Confirmation	8/26/2009
HZET0902	008	DRG-1	Confirmation	8/26/2009
HZET0903	800	DRG-1	Confirmation	8/26/2009
HZET0904	800	DRG-1	Confirmation	8/26/2009
HZET1000	008	HVS-2A	Pipeline Confirmation	10/6/2009
HZET1001	800	HVS-2A	Pipeline Confirmation	10/6/2009
HZET1002	800	HVS-2A	Pipeline Confirmation	10/19/2009
HZET1100	008	HVS-2D	Pipeline Confirmation	10/19/2009



PROJECT NUMBER:	BORING NUMBER:					_
384727	A2BS1074	SHEET	1	OF	1	

PROJECT : ISRA Soil Sampling, SSFL	LOCATION:
ELEVATION:	DRILLING CONTRACTOR: CH2M HILL

DRILLING EQUIPMENT AND METHOD: **ORIENTATION:** WATER LEVELS: ---START: 4/2/2009 END: 4/2/2009 LOGGER: M. Oviedo DEPTH BELOW EXISTING GRADE (ft) SOIL DESCRIPTION COMMENTS STANDARD PENETRATION TEST RESULTS £ € SAMPLE RECOVERY (SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY SYMBOLIC DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION INTERVAL 6"-6"-6" (N) 0.0 Silty Sand (SM) 0-1.5'- brown, (10YR 4/8), dry, very loose, 20% fines, 80% fine sand, some sandstone gravel PID = 1.6 ppm at 0.5' bgs A2BS1074S001 (2) collected at 0.5' bgs 1.5 refusal at 1.5' bgs Bottom of Boring at 1.5 ft bgs on 4/2/2009 refusal at 0.25' bgs refusal at 1.5' bgs on sandstone, no groundwater, staining, or odors observed 5 10 15 20 25



PROJECT NUMBER:	BORING NUMBER:					
384727	A2BS1075	SHEET	1	OF	1	

PROJECT : ISRA Soil Sampling, SSFL LOCATION :	
Those of Liota con camping, core	
ELEVATION: DRILLING CONTRACTOR: CH2M HILL	
DRILLING EQUIPMENT AND METHOD : Hand Auger ORIENT	ATION :
WATER LEVELS: START: 4/2/2009 END: 4/2/2009 LOGGEF	R : M. Oviedo
STANDARD SOIL DESCRIPTION O COMMENTS	3
TEST RESULTS SOIL NAME, USCS GROUP SYMBOL, COLOR, DEPTH OF CASING, DRI	TESTS, AND
MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY NOT INSTRUMENTATION OF CONSISTENCY, SOIL STRUCTURE, MINERALOGY NOT CONSISTENCY, SOIL STRUCTURE, MINERALOGY	HON
0.6 Silty Sand (SM)	
0-0.5'- dark brown, (10YR 3/3), moist, loose, 20% fines, 80% fine sand Bottom of Boring at 0.5 ft bgs on 4/2/2009 PID = 1.1 ppm at 0.5' bgs A2BS1075S001 collected at refusal at 0.5' bgs due to tree	e roots twice
refusal at 0.5' bgs on roots a groundwater, staining or odd	nd sandstone, no ors observed
	_
10 -	
	_
	_
	_
1 1 1 1	



PROJECT NUMBER:	BORING NUMBER:					_
384727	A2BS1076	SHEET	1	OF	1	

PROJECT : ISRA Soil Sampling, SSFL	LOCATION:
ELEVATION:	DRILLING CONTRACTOR : CH2M HILL

DRILLING EQUIPMENT AND METHOD: Hand Auger **ORIENTATION:** WATER LEVELS: START: 4/2/2009 END: 4/2/2009 LOGGER: M. Oviedo DEPTH BELOW EXISTING GRADE (ft) SOIL DESCRIPTION COMMENTS STANDARD PENETRATION TEST RESULTS SAMPLE RECOVERY (ft) € SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY SYMBOLIC DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION INTERVAL 6"-6"-6" (N) 0.0 Poorly Graded Sand With Silt (SP-SM) 0-1.3'- dark brown, (10YR 3/3), moist, loose, 10% fines, 90% fine sand, rootlets present PID = 1.1 ppm at 0.5' bgs 1.3 A2BS1076S001 collected at 0.5' bgs Bottom of Boring at 1.3 ft bgs on 4/2/2009 refusal at 1.3' bgs, no where else to hand auger due to surrounding sandstone refusal on sandstone at 1.3' bgs, no groundwater, staining or odors observed 5 10 15 20 25



PROJECT NUMBER:	BORING NUMBER:					
384727	A2BS1077	SHEET	1	OF	1	

PROJECT : ISRA Soil Sampling, SSFL	LOCATION:	
ELEVATION:	DRILLING CONTRACTOR: CH2M HILL	
DRILLING EQUIPMENT AND METHOD : Hand Auger	ORIENTATION	:

DRILLIN	IG EQUII	PMENT A	ND MET	HOD : Hand Aug	er	ORIENTATION:
WATER	LEVELS	S:	,		START : 4/2/2009 END : 4/2/2009	LOGGER : M. Oviedo
^ ADE				STANDARD	SOIL DESCRIPTION 0	COMMENTS
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	SAMPLE RECOVERY (ft)	#TYPE	PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
10	型 0.0 1.0 2.5	SAM	JAL#		Silty Sand (SM) 0-1'- dark brown, (10YR 3/3), moist, loose, 20% fines, 80% fine sand, roots and rootlets present Silty Sand (SM) 1-2'- Same as 0-1' except dark yellowish brown, (10YR 3/6) Silty Sand (SM) 2-2.5'- brown, (7.5YR 4/4), moist, loose, 20% fines, 50% fine sand, 30% medium sand Bottom of Boring at 2.5 ft bgs on 4/2/2009	INSTRUMENTATION A2BS1077S001 collected at 2.5' bgs refusal at 1.5' bgs PID = 1.2 ppm at 2.5' bgs refusal at 2.5' bgs on sandstone, no groundwater, staining or odors observed
1						



PROJECT NUMBER:	BORING NUMBER:					
384727	A2BS1088	SHEET	1	OF	1	

PROJECT : ISRA Soil Sampling, SSFL LOCATION :

ELEVATION : N/A DRILLING CONTRACTOR : CH2M HILL

DRILLING EQUIPMENT AND METHOD : Hand Auger ORIENTATION :

WATER				TIOD : Halla / lags	START : 4/3/2009	END : 4/3/2	2009	LOGGER : C. Smiga
V NDE				STANDARD	SOIL DESCRIPTION			COMMENTS
DEPTH BELOW EXISTING GRADE (ft)	Interval (ft)	SAMPLE RECOVERY (ft)	#TYPE	PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLC MOISTURE CONTENT, RELATIVE DENSITY CONSISTENCY, SOIL STRUCTURE, MINERAL	OR, OR LOGY	SYMBOLIC LOG	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
- - -	0.0				Poorly Graded Sand (SP) 0-3.5'- brown, (10YR 4/3), moist, dense, fine to n grained, some silt, 90% sand, 10% silt, trace clay	nedium - y - - -		PID = 0.4 ppm A2BS1088S001 1230 Pb 1st attempt - refusal at 2.0', step over 2.0' south 2nd attempt - refusal at 3.5'
-	3.5				Bottom of Boring at 3.5 ft bgs on 4/3/2009			TD = 3.5' bgs
_ =						-		
5								_
_						-		-
_								_
-						-		-
_						-		<u>-</u>
_						_		-
10								
-						-		-
-						-		-
-						-		-
-						1		-
-						-		-
						-		-
15						_		_
-						-		-
-						_		<u>-</u>
-						-		-
						_		-
-						-		-
20								
-						_		-
-						1		-
-						-		-
] -						4		_
						_		_
25						-		-
25								



PROJECT NUMBER:	BORING NUMBER:					
384727	A2BS1089	SHEET	1	OF	1	

PROJECT : ISRA Soil Sampling, SSFL LOCATION : Landfill

ELEVATION : N/A DRILLING CONTRACTOR : CH2M HILL

DRILLING EQUIPMENT AND METHOD: Hand Auger ORIENTATION:

DRILLIN	G EQUIF	PMENT A	ND MET	HOD : Hand Aug	er			ORIENTATION:
WATER	LEVELS	8:			START: 4/2/2009	END : 4/2	/2009	LOGGER : C. Smiga
円				CTANDADD	SOIL DESCRIPTION			COMMENTS
DEPTH BELOW EXISTING GRADE (ft)	INTERVAL (ft)	SAMPLE RECOVERY (ft)	#TYPE	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, (MOISTURE CONTENT, RELATIVE DEN CONSISTENCY, SOIL STRUCTURE, MIN	SITY OR	SYMBOLIC LOG	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
-				(. 1)	Poorly Graded Gravel (GP)		. •	
#EGROUP	0.0 1.0 NTERV	SAMPLI RECOV	#TYPE	6"-6"-6" (N)	MOISTURE CONTENT, RELATIVE DEN	SITY OR ERALOGY	SVMBO	DRILLING FLUID LOSS, TESTS, AND
- - - -							-	
25							1	



PROJECT NUMBER:	BORING NUMBER:					_
384727	A2BS1090	SHEET	1	OF	1	

PROJECT : ISRA Soil Sampling, SSFL LOCATION : Landfill

ELEVATION: N/A DRILLING CONTRACTOR: CH2M HILL

DRILLING EQUIPMENT AND METHOD : Hand Auger ORIENTATION :

DRILLIN	G EQUIP	-IVICINI P		HOD : Hand Auge	21		ORIENTATION:
WATER	LEVELS	:			START: 4/2/2009	END : 4/2/20	
DEPTH BELOW EXISTING GRADE (ft)				STANDARD	SOIL DESCRIPTION	Ι,	COMMENTS
SR O NA A	£	€		STANDARD PENETRATION TEST RESULTS			
G G)	k		TEST RESULTS	SOIL NAME, USCS GROUP SYMBOL, CO	OLOR.	DEPTH OF CASING, DRILLING RATE.
T 포트	X	##	Ш		SOIL NAME, USCS GROUP SYMBOL, CO MOISTURE CONTENT, RELATIVE DENS	ITY OR	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND
KEP (INTERVAL (ft)	SAMPLE RECOVERY (ft)	#TYPE	6"-6"-6"	CONSISTENCY, SOIL STRUCTURE, MINER	OLOR, ITY OR RALOGY	INSTRUMENTATION
ОШ€		ŊΩ	#	(N)		٥	
	0.0				Silty Sand (SM)		<u> </u>
	1.0				0-1'- dark olive brown, (2.5Y 3/3), moist, dens grained, 60% sand, 60% silt, trace clay	se, fine	PID = 7.0 ppm
					Clayey Sand (SC)	/_ <i>_</i> //	A2BS1090S001 1200 Pb
					1-3 8'- dark vellowish brown (10YR 3/6) moi	st dense	
					1-3.8'- dark yellowish brown, (10YR 3/6), mois fine grained, 80% sand, 20% clay, trace silt	ot, derise,	
					. .	72/	
						7/2	
	3.8				01 01 (00)	<i>_</i>	
					Clayey Sand (SC) 3.8-5'- Same as 1-3.8'	72	A2BS1090S002 1210 Pb -
5	5.0				3.0-3 - Same as 1-3.0	72	
-	-				Bottom of Boring at 5.0 ft bgs on 4/2/2009		
1 7						1	-
1 -						1	
1 7						1	1
_						1	-
1 -						1	1
						1	-
						1	-
-						=	-
10						- 1	-
'~						_	_
-						- 1	-
-						- 1	-
-						- 1	-
_						- 1	-
-						- 1	-
-						-	-
-						- 1	-
-						-	-
15						- 1	-
'5_						_	_
-		1	1				<u>-</u>
-							-
-							-
-			1			1	1
-							-
-							-
-							-
-						-	-
20						-	-
20-						-	_
-						-	-
-						-	-
-						-	-
-						-	-
-						4	-
-		1	1			4	-
-						4	-
-						4	-
							-
25							+
							<u> </u>



PROJECT NUMBER:	BORING NUMBER:					
384727	A2BS1091	SHEET	1	OF	1	

PROJECT : ISRA Soil Sampling, SSFL	LOCATION : Landfill
ELEVATION: N/A	DRILLING CONTRACTOR : CH2M HILL

DRILLIN	G EQUIF	PMENT A	ND MET	HOD :				ORIENTATION:
WATER	LEVELS	:			START: 4/3/2009	END : 4/3/2	2009	
DEPTH BELOW EXISTING GRADE (ft)				STANDARD PENETRATION	SOIL DESCRIPTION		90	COMMENTS
SELO G GR	INTERVAL (ft)	SAMPLE RECOVERY (ft)		TEST RESULTS	SOIL NAME USCS GROUP SYMBOL C	OLOR	SYMBOLIC LOG	DEPTH OF CASING, DRILLING RATE,
STIN	≣RV	APLE SOVE	H.		SOIL NAME, USCS GROUP SYMBOL, C MOISTURE CONTENT, RELATIVE DENS CONSISTENCY, SOIL STRUCTURE, MINE	SITY OR	1BOL	DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
BXX €	Z Z	SAN	#TYPE	6"-6"-6" (N)	CONSISTENCE, SOIL STRUCTURE, MINE	RALOGI	SYN	INSTRUMENTATION
	0.0				Silty Sand (SM)			
-					0-4.8'- brown, (10YR 4/3), moist, medium de dense, fine grained, some fine to coarse grav clay, 70% sand, 30% silt	rise to vel, trace =		PID = 4.7 ppm A2BS1091S001 1250 Pb
-					clay, 70% sand, 30% silt	-		
]		
-						-		-
						_		
	4:8 5:8 /					_		PID = 6.0 ppm
5	\ 5:0 /				4.8-5'- olive brown, (2.5Y 4/4), dense, 60% s	and, 40%		A2BS1091S002 1300 Pb
					\silt Bottom of Boring at 5.0 ft bgs on 4/3/2009	/ -		
_					Ç Ç	-		-
-						-		-
-						-		-
						_		
10								
-						-		-
						_		_
-						-		-
-						-		-
						_		
-						-		-
15								
-						-		-
-						-		-
-						-		_
-						-		-
						-		
20_						-		-
						=		_
-						-		-
-						-		_
-						-		-
]						1		
25								
							_	



PROJECT NUMBER:	BORING NUMBER:	
384727	A2BS1092	SHEET 1 OF 1

PROJECT : ISRA Soil Sampling, SSFL LOCATION : Landfill

ELEVATION: N/A DRILLING CONTRACTOR: CH2M HILL

DRILLING EQUIPMENT AND METHOD:

ORIENTATION:

	G EQUIF						ORIENTATION:
WATER	LEVELS	:			START : 4/2/2009 END : 4/2	2/2009	LOGGER : C. Smiga
DEPTH BELOW EXISTING GRADE (ft)				STANDARD	SOIL DESCRIPTION		COMMENTS
××	G:	Œ		STANDARD PENETRATION		⊣ %	-
H P	_ (fi	≿		TEST RESULTS	COIL NAME LICOS OPOLID OVARDOL COLOR	C L	DEDTH OF CASING DOWNING DATE
I a B	×	EE			SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR	Ę	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND
FA	INTERVAL (ft)	MP CO'AP	/PE	6"-6"-6"	CONSISTENCY, SOIL STRUCTURE, MINERALOGY	ΜB(INSTRUMENTATION
⊟⊠€	Z	SAMPLE RECOVERY (ft)	#TYPE	6"-6"-6"	2 2	SYMBOLIC LOG	
\vdash			**	(14)	Silty Sand (SM)	 , , , , , , , , , , , , , , , , , ,	
-	0.0				0-1'- dark olive brown (2.5V 3/3) moist medium to	-	DID = 1.9 nnm
-	1.0				0-1'- dark olive brown, (2.5Y 3/3), moist, medium to coarse grained, 80% sand, 20% silt	4	PID = 1.8 ppm
	1.5				Silt (ML)		S001 1420 Pb
					\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1///	_
					grained, 70% silt, 30% clay	1///	
1 7					Clayey Sand (SC)	1///	·
1 1					1.5-3.8'- dark olive brown, (2.5Y 3/3), moist to wet,	1///	-
1 -	3.8				dense, fine grained, 60% sand, 40% clay, trace silt	1///	-
-					Poorly Graded Sand (SP)	1 :::	-
	5 0				3.8-5'- brown, (10YR 4/3), wet, dense, medium grained,	1	PID = 5.5 ppm S002 1445 Pb
5	5.0				— trace silt	+	TD = 5.0', no refusal
-					Bottom of Boring at 5.0 ft bgs on 4/2/2009	4	TD = 5.0 , No relusar
-						4	-
						1	-
						1	_
1 7]	
1 7						1	
1 1						1	
1 -						1	-
-						┨	-
40						1	-
10					-	4	
-						4	-
-						4	-
						1	-
						1	_
1						_	
1 7						1	
1 1						1	
-						1	-
-						1	-
15						1	-
15_					-	-	
-						4	-
-						4	-
						4	-
_						1	_
						_	
1 7]	
1 7						1	
						1	-
-						1	-
20						1	-
20_					-	-1	
-						4	-
-						4	-
1 -						4	-
_						1	_
						_	
1 7						1	·
						1	-
-						1	-
-						1	-
25						1	-
25						+	
						1	
		l		1		1	



PROJECT NUMBER: 372353.RA.FS BORING NUMBER: A2BS1093

SHEET 1 OF 1

SOIL BORING LOG

PROJECT : NASA SSFL ISRA LOCATION : Landfill ELEVATION: N/A DRILLING CONTRACTOR: CH2M HILL

DRILLING EQUIPMENT AND METHOD : Hand Auger ORIENTATION: Vertical

\\\ \T_D				HOD . Hallu Augi		END : C/	10/00/	ORIENTATION : VEILICAL
WATER <u>u</u>	LEVELS			i	START : 6/16/2009 SOIL DESCRIPTION	END : 6/	10/200	09 LOGGER : C. Smiga COMMENTS
DEPTH BELOW EXISTING GRADE (ft)		£		STANDARD PENETRATION	SOIL DESCRIPTION		98	COIVIIVIENTS
SEC	INTERVAL (ft)	SAMPLE RECOVERY (ft)		PENETRATION TEST RESULTS	COIL NAME LISCS CROUD SYMBOL COI	OB	SYMBOLIC LOG	DEDTH OF CASING DOULING DATE
H B E	% ₹	팅			SOIL NAME, USCS GROUP SYMBOL, COI MOISTURE CONTENT. RELATIVE DENSIT	Y OR	O	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS. TESTS. AND
TEPT (Ë	MAN CONTRACT	#TYPE	6"-6"-6"	MOISTURE CONTENT, RELATIVE DENSIT CONSISTENCY, SOIL STRUCTURE, MINER	ALOGY	₩	DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
⊒U€			L #	(N)				
	√ 0.θ_	3.6			Silty Sand (SM)		7111	
-					0-0.3'- dark olive brown, (2.5Y 3/3), dry, dense, medium grained, 60% sand, 40% silt, trace cla	, fine to v trace	4	Sample A2BS1093S001 at 15:45 - Dioxins
_					\fine gravel	y, a doo	4	PID = 2.5 ppm
_					Bottom of Boring at 0.3 ft bgs on 6/16/2009		-	No refusal
-							1	-
-							1	-
-							1	-
-							1	-
5							1	1
						_]	
							1	
-							1	_
-							4	-
-							-	-
-							+	-
-							+	-
-							1	-
10							1	-
						_	1	_
]	
]	
_							1	_
-							4	-
-							4	-
-							1	-
-							1	-
15_							1	-
'-						-	1	
							1	
							1	
-							4	_
-							4	-
-							4	-
-							+	-
-							1	-
20							1	
						_		
]	
]]							1	
-							1	_
-							4	-
-							4	-
-							-	-
-							+	-
25							1	-
							1	



PROJECT NUMBER: BORING NUMBER: 372353.RA.FS

A2BS1095

SHEET 1 OF 1

SOIL BORING LOG

PROJECT : NASA SSFL ISRA LOCATION : Landfill

ELEVATION: N/A DRILLING CONTRACTOR: CH2M HILL

DRILLING EQUIPMENT AND METHOD: Hand Auger ORIENTATION · Vertical

DRILLIN	G EQUIF	PMENT A	ND MET	HOD : Hand Aug	er			ORIENTATION : Vertical
WATER	LEVELS	:			START: 6/16/2009	END : 6/16	/200	9 LOGGER : J. Ockerman
_ BC				STANDARD	SOIL DESCRIPTION			COMMENTS
DEPTH BELOW EXISTING GRADE : (ft)	INTERVAL (ft)	SAMPLE RECOVERY (ft)	#TYPE	PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOF MOISTURE CONTENT, RELATIVE DENSITY (CONSISTENCY, SOIL STRUCTURE, MINERALO	R, OR OGY	SYMBOLIC LOG	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION
_	0.0 1.0	12.0			Silt (ML) 0-1'- brown, (10YR 4/3), dry, hard, 70% fines, 30%	% fine		Sample A2BS1095S001 at 15:00 - Pb
_	1.0	18.0			sand with occasional gravel up to 30 mm Silty Sand (SM)			PID = 0.2 ppm
-	2.5				1-2.5'- dark yellowish brown, (10YR 4/4), moist, 70 fine to medium sand, 30% fines Poorly Graded Sand (SP)	0% -	Ш	- -
- -	4.5	24.0			2.5-4.5'- brown, (7.5YR 4/6), moist, medium dense 100% medium grained sand	e, _ _ -		- - -
5_	4.5				Bottom of Boring at 4.5 ft bgs on 6/16/2009	_	• • •	Sample A2BS1095S002 at 15:15 - Pb PID = 0.2 ppm
-						- -		No refusal
-						-		- -
-						-		- -
_						-		- -
10						_		- -
-						- -		- -
-						_		- -
_						_		- -
-						-		- -
15						_		- -
-						-		- -
-						-		- -
-						-		- -
-						-		- -
20						_		- -
-						-		- -
-						-		<u>-</u>
-						-		- -
-						-		-
25_						_		-



PROJECT NUMBER: BORING NUMBER: 372353.RA.FS

A2BS1096

SHEET 1 OF 1

SOIL BORING LOG

PROJECT : NASA SSFL ISRA	LOCATION : Landfill
ELEVATION NIA	DDILLING CONTRACTOR, CHOMILIE

ELEVATION: N/A DRILLING CONTRACTOR: CH2M HILL DRILLING EQUIPMENT AND METHOD: Hand Auger ORIENTATION: Vertical WATER LEVELS: ---START: 6/16/2009 END: 6/16/2009 LOGGER: C. Smiga DEPTH BELOW EXISTING GRADE (ft) SOIL DESCRIPTION COMMENTS STANDARD PENETRATION TEST RESULTS SAMPLE RECOVERY (ft) € SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION INTERVAL 6"-6"-6" (N) 0.0 3.6 0-0.3'- dark olive brown, (2.5Y 3/3), moist, soft, fine grained sand, 60% silt, 40% sand, trace clay
Bottom of Boring at 0.3 ft bgs on 6/16/2009 Sample A2BS1096S001 at 15:05 - Pb PID = 0.0 ppmNo refusal 5 10 15 20 25

	MW				1_	4-15	41- 750 ·		oring ID: A2E		0.4						_
Borehole							th (ft): 1			Sampling - Outfall 00							_
Northing			182.61				t): 179 (Number: 1891614		Site: A2LF						_
Drill Start			0-2009				e: NR		gged By: A. Gold	_		By: B. Marta		P.G.			
Drill Finis							ne: NR		Iling Contractor: En			mentation: I	PID				_
Depth 1s				N/A			ne: N/A			Grab (hand sampling)						_
Depth H ₂							ne: N/A	Dril	ller's Name: Not a		_						_
Commen										Well Comp. Date: N/		Completion			I/A		
	: Gra	b sam	ple co	llect	ted in 6	3-inch s	stainless	steel sleeve		Soil Backfill Date: N/	A	Backfill Time			I/A		_
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		ı	Description			Gravel	Sand	Med. Sand	Fine Sand 8	il
s			0.0		1-		SM	Silty Sand, dark	g ISRA-A2LF-1 for I x yellowish brown (1 ots and rootlets, biot	ithology] 0YR 4/4 to 3/6), loose turbation observed, no o	o medium de odor, no stain	nse, ing		5	20	30	
					-			Total Depth = 1	.5 ft; terminated price	or to refusal on bedrock	,						<u> </u>
					2-			Collected soil sa sidewall.	amples S001 and S	001-RWQCB at 14:33 t	from excavati	on					
					-			Excavation not l	backfilled.								
					3-												
	-																
					4-												
5-																	
					6-												
					_												
	7-																
	8-																
					-												
					9-												
					10												

Borehole I	MW				T	-1.5	u. 760 -	Boring ID: A2ET0101						_
							th (ft): 3							_
Northing (77.56): 1790		A2LF-1 Area					_
Orill Start						rt Time			wed By: B. Mart		P.G			
Orill Finish	Date:	11-1	0-2009)	Fin	ish Tim	ne: NR	Drilling Contractor: Envirosolve Field	Instrumentation:	PID				
Depth 1st	H₂O (ft	t):		I/A	Dat	te / Tim	e: N/A	Drill Rig Type/Method: Grab (hand sampling)						_
Depth H ₂ C) After	Drilling	g (ft): N	I/A	Dat	te / Tim	e: N/A	Driller's Name: Not applicable						
Comment	s: Soil	with I	brush	at su	rface			Well Comp. Date: N/A	Completion	Time	e: I	N/A		
Samplers:	Gral	b sam	ple co	llecte	d in 6	-inch s	tainless	steel sleeve Soil Backfill Date: N/A	Backfill Tim	ne:		N/A		
<u> </u>							_				Est.	% o	f So	il
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description [See Trench Log ISRA-A2LF-1 for lithology]		Gravel	Coarse Sand	Med. Sand	Fine Sand	
***					1- 2-		SM	Silty Sand, yellowish brown (10YR 5/6) to dark yellowish brown (0YR 4/6)	5	5	20	30	
S			0.0		3-4-			medium dense with pockets of loose soil, moist, subangular grav subrounded grains, many roots and rootlets, no odor, no staining Total Depth = 3.0 ft; terminated due to refusal, possibly on bedro Collected soil samples S001, S001SP, and S001-RWQCB at 14: excavation floor. Excavation not backfilled.	el, subangular to [Colluvium] ck.					
					5— -									
					6-									
					7-									

₩ MW			1_	4-15	4- 750 -	Boring ID: A2ET0102					
Borehole Diam.					th (ft): 2	Project: SSFL ISRA Sampling - Outfall 008 Area					
Northing (ft):	26947				t): 1790						
Orill Start Date:					: NR	Logged By: A. Goldenberg Reviewed By: B. Mar		P.G			
Orill Finish Date:				nish Tim	ne: NR	Drilling Contractor: Envirosolve Field Instrumentation:	PID				
Depth 1st H ₂ O (f	•	N/A			ne: N/A	Drill Rig Type/Method: Grab (hand sampling)					
Depth H ₂ O After	Drilling	(ft): N/A	Da	ate / Tim	ne: N/A	Driller's Name: Not applicable					
Comments: Soil	l with b	rush at	surface			Well Comp. Date: N/A Completio	n Time				
	b samp	ole colle	cted in (6-inch s	tainless	I sleeve Soil Backfill Date: N/A Backfill Tir			N/A		
Sample Interval Retained Sample Type Recovery (%)	Blow Count/6"	PID (ppm) Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Coarse Sand	Med. Sand	Fine Sand	
Sa Re Sa	ĕ 8	<u>₽</u> ×	_0_ 0_	Ş	Cis	ee Trench Log ISRA-A2LF-1 for lithology]	อื่	පි	Me	Ē	į
			1-	-							
S		0.0	2-		SM	ty Sand, yellowish brown (10YR 5/6) to dark yellowish brown (10YR 4/6), edium dense, moist, subangular to subrounded grains, roots and rootlets, odor, no staining [Colluvium]		5	20	30	4
			-	CALCADICAL CO.		tal Depth = 2.5 ft; terminated prior to refusal on bedrock.					
			3-			ellected soil samples S001 and S001-RWQCB at 14:38 from excavation floor.					
						cavation not backfilled.					
			4								

	ИW					4-1-0	4F (ti) =	Boring ID: A2ET0200					
Borehole		`					th (ft): 5						
Northing (67.28				t): 1790						
Orill Start			6-2009				e: NR	Logged By: A. Goldenberg Reviewed By: B. Marta		P.G.			
Orill Finish							ne: NR	Drilling Contractor: Envirosolve Field Instrumentation: I	PID				
Depth 1st				N/A			ne: N/A	Drill Rig Type/Method: Grab (hand sampling)					
Depth H ₂ C						te / Tin	ne: N/A	Driller's Name: Not applicable					
Comment								Well Comp. Date: N/A Completion	Time		N/A		
	Gra	b sam	ple co	llect	ed in 6	inch s	stainless	steel sleeve Soil Backfill Date: N/A Backfill Time			N/A		
Sample Interval Retained Sample Type							_				% o	f So	il
Sample Interv Retained Sample Type			_	 ⊚	æ	Graphic Log	USCS Soil Classification			Coarse Sand	-	_	
Sample In Retained Sample T	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	ic I	So	Description		S	Med. Sand	Fine Sand	2
를 할 다	8	≱ ‡	d)	호	ţ	ph	SSi		Gravel	J. S.	5	S	نَ
San San	% %	읊	₽	Ş	Эер	Gra	Sla		<u>2</u>	Š	Je V	غ ا	Silt/Clay
,, II 0,				H	- 0-			[See Trench Log ISRA-A2LF-3 for lithology]	-	_	_	_	-
								[See Helich Log ISRA-AZEF-3 for illinology]					
					1-								
					_								
					_								
					2-								
					_								
					_								
					3-								
					-								
					4-	推翻	SM	Silty Sand, very dark grayish brown (10YR 3/2), medium dense, moist,		5	20	30	4
								organic-rich, no odor, no staining [Alluvium]					
×					_								
⊗ s			0.0										
			0.0		_								
					5	4 4 4 4 F 1		Total Depth = 5.0 ft; terminated prior to refusal on bedrock.					
								·					
					-			Collected soil samples S001 and S001-RWQCB at 10:50 from excavation floor.					
								Excavation not backfilled.					
					•								
					6								
					-								
					7-								
					,-								
					-								
					8-								
					o -								
					-								
					9-								
					9-								
					-								
									1				
	- 1									l			

	MW				-	tal D =	th (tt): •	Boring ID: A2ET0201					_			
Borehole							th (ft): 2						—			
Northing (787.01				t): 1790						—			
Orill Start			6-2009				e: NR	Logged By: A. Goldenberg Reviewed By: B. Mart		P.G.						
Orill Finis							ne: NR	Drilling Contractor: Envirosolve Field Instrumentation:	PID				_			
Depth 1st				N/A			ne: N/A	Drill Rig Type/Method: Grab (hand sampling)					_			
Depth H ₂ 0						te / Tin	ne: N/A	Driller's Name: Not applicable								
Comment								Well Comp. Date: N/A Completion								
	: Gra	b sam	ple co	llecte	ed in 6	inch s	stainless	steel sleeve Soil Backfill Date: N/A Backfill Tim			N/A		_			
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description [See Trench Log ISRA-A2LF-3 for lithology]	Gravel	Coarse Sand	Med. Sand	Fine Sand 6				
s			0.0		1— 2—		SM	Silty Sand, mottled very dark grayish brown (10YR 3/2) to dark yellowish brown (10YR 3/4), medium dense to dense, moist, subangular to subrounded gravel, organic-rich (roots and rootlets), no odor, no staining [Fill] [See Trench Log ISRA-A2LF-3 for lithology]	10	5	20	25	4			
					+			Total Depth = 2.5 ft; terminated prior to refusal on bedrock.					+			
					3-		Collected soil samples S001 and S001-RWQCB at 10:44 from excavation sidewall.									
							sidewall.									
							sidewall. Excavation not backfilled.									
					- 1											
					4-											
					4											
					_											
					5-											
					4											
					6-											
					-											
					+											
					7-											
					1											
					8-											
					1											
					9-											
					4											
I																

	Н		1			Boring ID: A2ET0202					
Borehole Diam.					th (ft): 2						
Northing (ft):	26879): 1790						
Orill Start Date:				art Time		Logged By: A. Goldenberg Reviewed By: B. Mart		P.G	•		
Orill Finish Date				ish Tim		Drilling Contractor: Envirosolve Field Instrumentation:	PID				
Depth 1st H ₂ O (f	-	N/A			e: N/A	Drill Rig Type/Method: Grab (hand sampling)					
Depth H ₂ O After	Drilling	(ft): N/A	Da	te / Tim	e: N/A	Driller's Name: Not applicable					
Comments: Soi	l with b	rush at si	urface			Well Comp. Date: N/A Completion	Time		N/A		
Samplers: Gra	b samp	le collect	ed in 6	-inch s	tainless	teel sleeve Soil Backfill Date: N/A Backfill Tim			N/A		
Sample Interval Retained Sample Type Recovery (%)	Blow Count/6"	PID (ppm) Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Sand	Med. Sand	Fine Sand	
			1—		30	Fill [See Trench Log ISRA-A2LF-3 for lithology]	8		2		
s		0.0	2			[Fill/Alluvium Contact?] Silty Sand, brown (10YR 4/3) mottled with dark brown (10YR 3/3) organics, medium dense to dense, moist, rootlets, no odor, no staining [Alluvium]		5	20	30	_
			+			Total Depth = 2.5 ft; terminated prior to refusal on bedrock.					ļ
			3-			Collected soil samples S001 and S001-RWQCB at 10:38 from excavation floor.					
						Excavation not backfilled.					
			5— 5— 7— 8—								

	MW							Boring ID: A2ET0203						
Borehole		(in.): 2	!				th (ft): 4	Project: SSFL ISRA Sampling - Outfall 008 Area						
Northing (794.64				t): 1790							
Orill Start							e: NR		: B. Martas	sin,	P.G.			
Orill Finisl			6-2009	•			ne: NR		entation: Pl	ID_				
Depth 1st				N/A			ne: N/A	Drill Rig Type/Method: Grab (hand sampling)						_
Depth H ₂ 0							ne: N/A	Driller's Name: Not applicable						
Comment								-	Completion T			N/A		
	: Gra	b sam	iple co	llect	ed in 6	inch s	stainless	teel sleeve Soil Backfill Date: N/A	Backfill Time:			N/A		
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	_	Gravel	Coarse Sand	Med. Sand	Fine Sand	
0 E 0	ದ ಪ	<u>ш с</u>	<u> </u>	>	0-	G	50	[See Trench Log ISRA-A2LF-3 for lithology]		9	0	2	ш	_
S			0.0		1 2 3			Sandstone, light yellowish brown (10YR 6/4), weathered, hard, poorly ind friable when disturbed, moist, no odor, no staining [Chatsworth Formatio	lurated, n]					
					4-			Total Depth = 4.0 ft; terminated prior to refusal on bedrock.						H
					-			Collected soil samples S001 and S001-RWQCB at 10:30 from excavatic sidewall.	n					
					5-			Excavation not backfilled.						
					6-									
					-									
					7-									
					8-									
					-									
					9-									
					10-									

<u> </u>		ИW				1_	4-15	41- 750		Boring ID: CNB		45-11 000 4						
		Diam.						th (ft): 0			Sampling - Ou							_
North				319.35				t): 179		Job Number: 1891614		Site: C	-					
		Date:					art Time			Logged By: A. Leavi			ed By: B. Mart		P.G			
Orill F	inis	n Date:	02-2	5-2009	9			ne: 14:0		Drilling Contractor: B.L	Hall	Field In	strumentation:	PID				
		H ₂ O (f			N/A	Da	te / Tin	ne: N/A		Drill Rig Type/Method:	Hand Auger							_
Depth	n H₂(O After	Drilling	g (ft): N	N/A	Da	te / Tin	ne: N/A		Driller's Name: Ben C	isneros							
Comr	nent	s: Veg	jetatio	n at sı	urfac	e e					Well Comp. D	ate: N/A	Completion	Time	e: I	N/A		
Samp	lers	Har	nd trov	vel (sc	oil pla	aced ir	stainl	ess stee	el sleeves)		Soil Backfill Da	ate: 02-25-2009	Backfill Tim	e:	1	14:04	,	
<u>a</u>								_							Est.	% of	F So	il
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			escription			Gravel	Coarse Sand	Med. Sand	Fine Sand	
\otimes	s			0.0				SM	Silty Sand, o	lark yellowish brown (10 , plant debris [Alluvium]	YR 3/4), mediu	ım dense, moist,	weak	5		30	35	3
						_			Total Denth	= 0.5 ft; refusal on weat	hered Chatswo	orth Formation Sa	andstone					-
												rair oimaton o	andstone.					
						1-				il sample S001 (2 sleev	⊂s) at 14.00.							
									Backfilled w	ith auger cuttings.								
						_												
						•												
						2-												
						_												
						3-												
						_												
						4												
						_												
						_												
						5												
						-												
						_												
						6-												
						_												
						_												
						7-												
						-												
						•												
						8-												
						-												
						_												
						9-												
						-												
				İ	1				[1	1	1	1

2012	_	MW Diam				T-	tal Dav	th (ft): 0		Boring ID: CNB: Project: SSFL ISRA		I 000 Augs						—
		Diam.		25.56							Sampling - Outfal							_
Northii				5-2009				t): 1795 e: 14:0		Job Number: 1891614		Site: Can	_	nain	D C			_
		Date:								Logged By: A. Leavi			By: B. Marta		P.G			
		Date:			N/A			ne: 14:1		Drilling Contractor: B.I		Fleid instr	umentation:	PID				_
		H ₂ O (f) After	•					ne: N/A		Drill Rig Type/Method: Driller's Name: Ben C								_
		s: Veg					ate / Tirr	ne: N/A		Driller's Name: Ben C	Well Comp. Date:	NI/A	Completion	Time		N/A		_
							a otoinl	ot	l alagyag)				Completion					_
	iers:	пап	ia trov	vei (SC)II DI	aced ir	1 Stainie		l sleeves)		Soil Backfill Date:	02-25-2009	Backfill Tim			14:12 % of		,il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		_		SM	cementation	dark yellowish brown (10 n, plant debris [Alluvium]	JYR 4/4), medium (dense, moist, w	eak	5		30	35	
							3333		Total Denth	= 0.7 ft; refusal on wea	thered Chateworth	Formation Sand	letone					+
						1						r omidion ound	2010110.					
						•			Collected so	oil sample S001 (2 sleev	es) at 14:10.							
									Backfilled wi	ith auger cuttings.								
						2-												
						_												
						3-												
						3												
						-												
						4												
						_												
						5	1											
						-												
						6-												
						0												
						-												
						7-												
						_												
						-												
						8-	1											
						-												
						9												
						5												
						-												
					1 1	10-	1							1	1	1	I	

Boreh		Diam.	(in \· 2	<u> </u>		To	tal Den	th (ft): 0		Boring ID: CNB Project: SSFL ISRA	Sampling - Outfal	I 008 Area						_
Northi				160.17				t): 179 {		Job Number: 1891614		Site: Can	von					_
		Date:		5-2009				e: 14:1		Logged By: A. Leavi			By: B. Mart a	ncin	D C			_
		n Date:						ne: 14:1		Drilling Contractor: B. l			umentation: I		r.G.			
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:		i leiu ilisti	umemation. I	טו				
		∩ ₂ O (i	•					ne: N/A		Driller's Name: Ben C								_
		s: Veg					ile / Till	ie. NA		Dillier's Name. Ben C	Well Comp. Date:	N/A	Completion	Time	· •	N/A		
							etainl	nee etaa	el sleeves)		Soil Backfill Date:		Backfill Time			4:19		
	1013	. IIai	ia tiov	vei (sc		aceu ii	Julia		sieeves)		John Backilli Date.	02-23-2003	Dackilli Tilli			% of		il.
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	City Open ded		Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	Cilt/Cloy
	s			0.0				SM	cementation,	ark yellowish brown (10, plant debris [Alluvium	0 FR 4/4), medium (]	dense, moist, w	гак	5	5	30	30	3
\bigotimes						-			Total Donth	- 0 F ft. refueel en wee	thered Chatawarth	Formation Cons	latana					_
									Total Deptil -	= 0.5 ft; refusal on wea	mered Chaisworth	romation Sand	isione.					
						1-			Collected soi	il sample S001 (2 sleev	ves) at 14:17.							
						•			Backfilled wit	th auger cuttings.								
										-								
						_												
						2-												
						_												
						•												
						3												
						-												
						4												
						5												
						_												
						•												
						6-												
						-												
						7-												
						_												
						8-												
						-												
						9												
						3-												
						-												
				1	1 1	10-	1							1	1	1	I	1

Roreh	امام	Diam.	(in \· 2)		То	tal Den	th (ft): 0		oring ID: CNB	Sampling - Outfall	008 Area						_
Northi				111.02				t): 179 4		bb Number: 1891614		Site: Can	won					_
		ιι). Date:						i). 1792 e: 14:3					-		n c			_
				9-2009							asin, P.G.		By: B. Marta		P.G.			
		Date:						ne: 14:3		rilling Contractor: MV		Field Instr	umentation: I	N/A				
		H₂O (f	•		N/A			ne: N/A		rill Rig Type/Method:								_
) After						ne: N/A	Dr	riller's Name: B. Ma								
							n at su				Well Comp. Date:		Completion			N/A		
	lers:	Har	nd trov	vel (so	il pl	aced ir	stainl	ess stee	l sleeve)		Soil Backfill Date:	04-09-2009	Backfill Time			4:35		
Sample IntervalRetained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	© USCS Soil ⊠ Classification	Cilhy Cond, yoll	lowish brown (10YR	Description	ootlota [Alluvius	al.	Cravel 10	Coarse Sand	% Med. Sand	Sine Sand	
	s						•	SIVI	Silly Sariu, yell	ilowisii bilowii (101R :	5/6), 100Se, 1110ISt, 10	Joliets [Alluviuli	Ш	10	10	15	45	ľ
\otimes						_												1
									Total Depth =	0.5 ft; terminated price	or to refusal.							
									Collected soil s	sample S001 at 14:3	5.							
						1-												
									Backfilled with	native soil.								
						_												
						2-												
						-												
						3-												
						3												
						-												
						4-												
						-												
						_												
						5												
						5												
						_												
						6												
						•												
						_												
						7-												
						•												
						_												
						8-												
						-												
						-												
						9-												
						•												
						_												
	- 1			1	1 1	10-	1							1	I	1		

	1	ΜW	/H							Boring ID: CNB	S0132							
	_						4-1 D	. 41- (64)		· ·		-U 000 A						
			(in.): 3	3 417.76				oth (ft): 0			Sampling - Outfa							
North		(π): Date:		417.76 25-200				ft): 1795 e: 14:3		Job Number: 1891614 Logged By: A. Leav		Site: Car	i yon ⊟By: B. Mart	acin	D C			
			: 02-2					e: 14:3 ne: 14:3		Drilling Contractor: B.			umentation:		P.G.			
					9 N/A							Fleid illisti	umentation.	PID				
		H ₂ O (r Drillin					me: N/A		Drill Rig Type/Method:								
							ate / Tir	me: N/A		Driller's Name: Ben C		N/A	Completion	Time		I/A		
			ad gra				n otoin	lana ataa	l sleeve)		Well Comp. Date Soil Backfill Date		Backfill Tim			#A 4:45		
Sailik	лего	. па	liu tro	wei (St	JII PI	iaceu i	Stairi		i Sieeve)		Soli Backilli Date	. 02-25-2009	Dackilli Till			<u>4.43</u> % of		il.
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s			0.0		·	•	SW		ed Sand with Gravel, oliv	re gray (5Y 5/2), m	edium dense, m	oist	25	25	25	25	
∞							3007033		[Road Base	e =] h = 0.3 ft (3 in.);	on Chatsworth For	mation Sandstor						
							1					mation canastor	ю.					
						1-	-			soil sample S001 (1 sleev with auger cuttings.	ve) at 14:35.							
						2-												
						3-												
						-												
						4-												
						-												
						5-												
							-											
						6-												
						•												
						7-												
							1											
						8-	-											
						-	1											
						9-												
						-												
						40												

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

(1)) (ΜV	/H							Boring ID: CNB	S0133							
Dora'	_			,		-	otal Da	oth /#\. •	12	· ·		II 000 A=a=						
North			(in.): 3	441.76				oth (ft): 0 ft): 1795		Job Number: 1891614	Sampling - Outfa	Site: Car						
		Date:		5-200				ie: 14:3		Logged By: A. Leav			By: B. Mart	aein	D C			
			: 02-2					me: 14:3		Drilling Contractor: B.			umentation:		r.G.			
		: H ₂ O (N/A			me: N/A		Drill Rig Type/Method:		T leid iristi	umentation.	רוט				
			r Drillin					me: N/A		Driller's Name: Ben C								
			ad gra				ale / III	iic. NA		Dillier 3 Name. Den C	Well Comp. Date	· N/A	Completion	Time	· N	I/A		
							n etain	less stee	al sleeve)		Soil Backfill Date		Backfill Tim			4:46		
<u>r</u>	71013	. 11u	10 00	101 (31	J., p.	iuccu i	Juni		Jicovoj		Tooli Backiiii Batc	02-20-2000	Backilli Tilli		Est.			il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s			0.0		·	•	SW		ed Sand with Gravel, oliv	e gray (5Y 5/2), me	edium dense, m	oist	25	25	25	25	
∞							1000000		[Road Base	e =] h = 0.3 ft (3 in.);	on Chatsworth Forr	nation Sandstor						
						-	1					nation candstor	ic.					
						1-				soil sample S001 (1 sleev with auger cuttings.	ve) at 14:38.							
						-												
						2-	1											
						-	+											
						3-	1											
						•	1											
						4-	1											
						-	+											
						5-	1											
						•												
						6-	1											
						-	1											
						7-	1											
						-	-											
						8-												
						0-												
						-	1											
1						9-	1											
						-	-											
						10_												

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

	MW	Н							Boring ID: CNB	S0134							_
Borehole							th (ft): 0			A Sampling - Outfall							_
Northing			15.38				t): 1795		Job Number: 189161		Site: Can	_					_
Orill Start							e: 14:3		Logged By: A. Leav			By: B. Mart		P.G.			
orill Finis							ne: 14:4	4	Drilling Contractor: B.		Field Instr	umentation:	PID				_
Depth 1st				N/A			ne: N/A		Drill Rig Type/Method:	_							_
Depth H ₂ 0 Commen						ite / Tin	ne: N/A		Driller's Name: Ben (Well Comp. Date:	N/A	Completion	Time	· N	I/A		_
Samplers						stainl	ess stee	l sleeve)		Soil Backfill Date:		Backfill Tim			4:47		_
	1101	14 11 01	10. (00			- Otaliii				Con Backini Bate.	02 20 2000	Buokini Tin			% of		íl
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		1	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s			0.0	Н	0-		SW		ed Sand with Gravel, oliv	e gray (5Y 5/2), med	dium dense, mo	oist	25	25	25		T
			0.0					[Road Base		on Chatawarth Farm	ation Candatan		+				H
					-				h = 0.3 ft (3 in.); refusal o		alion Sanusion	le.					
								Collected s	soil sample S001 (1 slee	ve) at 14:44.							
					1-			Backfilled v	with auger cuttings.								
					-												
					2-												
					-												
					3-												
					-												
					4-												
					-												
					5												
					3												
					c												
					6-												
					_												
					_												
					7-												
					-												
					8-												
					-												
					9-												
					-												
	1			\perp	10-										ı		i.

		ΜW	/Н							Boring ID: CNB	S0135							
Borel	hole	Diam.	(in.): 3	3		Тс	otal De	oth (ft): 0	.5		A Sampling - Outfall 00	08 Area						
North				125.43	3			ft): 1795		Job Number: 189161		Site: Can	yon					
		Date:		1-200				e: 11:3		Logged By: S. Vale		I	By: M. Milm		arris	, P.C	€.	
			: 07-0					me: 11:3	5	Drilling Contractor: B		Field Instr	umentation:	N/A				
		t H₂O (tt): r Drillin		N/A			me: N/A		Drill Rig Type/Method: Driller's Name: Paul								
						•		avel at su	ırface	Dillier's Name. Paul	Well Comp. Date: N	Ι/Δ	Completion	Time	· •	I/A		
Samp									steel sleeve		Soil Backfill Date: 0		Backfill Tim			1:35		
													•	E		% of		il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Doorly Cro	ded Sand, yellow (10YR	Description	da .		Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	S							52	Poorly Grad	ded Sand, yellow (1016	(7/6), medium dense, (ary				tr	95	5
							7.57.57		T-4-1 D4	0 5 % 6 1		ti O	1-4					—
									(yellow, har	n = 0.5 ft; refusal on weard, moist).	athered Chatsworth Fol	rmation Sand	istone					
						1-	-		Collected s	soil sample S001 at 11:3	44							
							-		Backtilled v	with auger cuttings.								
						2-	-											
							-											
						3-												
						4-												
						7												
						5-												
						5 -												
							1											
						6-	1											
						'	1											
						7-	1											
						-	1											
						8-	1											
							1											
						9-	1											
							1											
						10-								1				

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

Borob	_	VI W		1		T_	tal Don	th (ft): 0		Boring ID: CNB Project: SSFL ISRA	Sampling - Outfall	I NNS Aros						
Northi				140.98				t): 179 5		Job Number: 1891614		Site: Can	von					_
		Date:		1-2009				e: 11:4		Logged By: S. Valer			By: M. Milm	an D	orrio	. D (_
				1-2009				ne: 11:4		Drilling Contractor: B.			<u>ыу. М. МШТ</u> umentation: I		aiii	ь, г.с	J.	
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:		i leiu ilisti	umentation. I	WA				
			-	g (ft): I				ne: N/A		Driller's Name: Paul I								_
								vel at su		Dillers Name. Faur	Well Comp. Date:	N/A	Completion	Time	· I	N/A		
									s steel sleeve		Soil Backfill Date:		Backfill Time			11:45		
	1013.	Gia	D Saii	ipie co		teu iii (J-111C11 8		S Steel Sieeve		Joli Dackilli Date.	07-01-2003	Dackilli Tilli			% of		il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s					Ū		SP	Poorly Grad	ed Sand, brownish yello	ow (10YR 6/6), med	lium dense, dry				tr	95	
\otimes						_			T D !!	0.5%		- " O						_
									(yellow, hard	= 0.5 ft; refusal on wead, moist).	tnered Chatsworth	Formation Sand	istone					
						1-			0-1141		2							
						•			Collected so	oil sample S001 at 11:4	3.							
									Backfilled wi	ith auger cuttings.								
						2-												
						_												
						3-												
						3												
						_												
						4-												
						_												
						5												
						-												
						6-												
						0												
						-												
						7-	1											
						_												
						8-												
						-												
						9-												
						3-												
						-												
		- 1		I	1 1	10-	1							1	1	1		-1

	MW				1_	4-15	41- 750	-	Boring ID: CNB		000 1						
Borehole							th (ft): 1		•	Sampling - Outfall							_
Northing (137.55				t): 179 5		Job Number: 1891614		Site: Cai	_					
Drill Start			4-2009			art Time				an-Barris		d By: S. Valer		la, P	G.		
Drill Finish							ne: 13:0		Drilling Contractor: B.I		Field Inst	rumentation: I	N/A				
Depth 1st				N/A			ne: N/A		Drill Rig Type/Method:								_
Depth H ₂ 0							ne: N/A		Driller's Name: Ben C								
Comment								s at surface, n	o debris	Well Comp. Date:		Completion	Time		N/A		
Samplers	: Gra	b sam	ple co	llect	ted in 6	3-inch s	stainless	steel sleeve		Soil Backfill Date:	08-24-2009	Backfill Time			3:04		
nterval ype	Description Description													_	% of		
Sample Interval Retained Sample Type	Samble Type Sample Type Sample Type Sample Type Sample Type Count/6 Mater Level Mater										Gravel	Coarse Sand	Med. Sand	Fine Sand			
s					1-		ML	Sandy Silt, moderate co		5/4), soft, dry, medii	um plasticity fir	nes,				30	70
					-	14414		Total Depth	= 1.5 ft; refusal on Cha	tsworth Formation.							\dagger
								Collected so	oil sample S001 (2 sleev	res) at 13:01							
					2-												
								Backfilled w	ith auger cuttings.								
					_												
					_												
					3-												
					-												
					4												
					_												
					_												
					5-												
					-												
					_												
					6												
					-												
					7-												
					,-												
					-												
					8-												
					•												
					-												
					9-												
					•												
					_												
	- 1		1	1 1	10-	1		I					1	1	i .		

<u>w</u> .	WIV	П							Boring ID: CNB	S0138							
Borehole							th (ft): 0			Sampling - Outfall							_
Northing (105.49				t): 179		Job Number: 189161		Site: Ca	_					
Orill Start							: 13:1		Logged By: M. Miln			By: S. Valer		a, P.	G.		
Orill Finisl Depth 1st				v/A			ne: 13:1 ne: N/A		Drilling Contractor: B Drill Rig Type/Method:		Fleid inst	rumentation:	N/A				
Depth H ₂ (ne: N/A		Driller's Name: Ben								_
					•				alt debris at surface	Well Comp. Date:	N/A	Completion	Time	e: N	I/A		
Samplers								s steel sleeve		Soil Backfill Date:	08-24-2009	Backfill Tim			3:15		
iterval ype				le/	et)	og.	Ition							Sand	% of		il_
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse S	Med. Sand	Fine Sand	Silt/Clav
s					U— -		ML	Sandy Silt, moderate c	yellowish brown (10YR ementation [Fill]	5/4), soft, dry, mediu	m plasticity fi	nes,				30	70
								Total Denth	= 0.8 ft: refusal on Cha	atsworth Formation							L
	Total Depth = 0.8 ft; refusal on Chatsworth Formation. Collected soil sample S001 (2 sleeves) at 13:14.																
Collected soil sample S001 (2 sleeves) at 13:14. Backfilled with auger cuttings.																	
									nur auger eatungs.								
	2-																
					3-												
					_												
					4-												
					5-												
					_												
					6-												
					-												
					7-												
					-												
					8-												
					-												
					9-												
					-												
								Ì							1		1

Boring ID: CNET0100 Borehole Diam. (in.): 2 Total Depth (ft): 3.2 Project: SSFL ISRA Sampling - Outfall 008 Area Northing (ft): 266428.39 Easting (ft): 1795047.89 Job Number: 1891614 Site: Canyon Drill Start Date: 09-23-2009 Start Time: NR Logged By: A. Goldenberg Reviewed By: V. Vathanasin											000 4						_
																	_
												-			_		_
										_		-		ın, P	.G.		
Orill Finish							ne: NR		Drilling Contractor: E		_	nstrumentation:	N/A				_
Depth 1st				N/A			ne: N/A			: Grab (hand sampli	ng)						_
Depth H ₂ O After Drilling (ft): N/A Date / Time: N/A Driller's Name: Not applicable Comments: Soil and rocks with minor brush at surface Well Comp. Date: N/A Co														_			
Comments: Soil and rocks with minor brush at surface Well Comp. Date: N/A									Completion	Time		N/A		_			
Samplers: Grab sample collected in 6-inch stainless steel sleeve Soil Backfill Date: N/A									Backfill Tim			N/A		_			
Sample Interval Retained Sample Type (%) Blow Count/6" PID (ppm) Water Level Classification Classification Classification USCS Soil Classification USCS Soil Classification						Description				Coarse Sand	Med. Sand	Fine Sand $ S_{0} $					
						danaa du.	Gravel 25	ပိ	W 45	Fi	;						
⊗ s	1— SM S gi						SIVI	gravel and co	obbles, no odor, no s	taining [Fill]	se to very	uense, ury,	25		45		•
					2-		Sandstone [Chatsworth Formation]										l
					-												
					3-												
								Total Evenya	ation Depth = 3.2 ft.								H
					-					S001-RWQCB at 09:3	3 from exc	eavation					
								sidewall.	an dampido door and	0001 KW QOD UK 00.0	o nom oxo	avallon					
					4-			Excavation b	packfilled 11-24-2009								
					5-												
					3												
					6-												
					_												
					7												
					-												
					8-												
					9-												
					9 -												
					-												

											1 1 101 30					
•	П	h .								•	Boring #:)1 \13F33 MW#:	She	et	1 0	of]	
etta.	Ū	$ar{m{U}}^{-n}$	NONT	GOME	ERY W	ATSO	N				Project: SSFL GROUP 1	Α				
•											Job #: 1881565 Site:	HV				
											Logged By: J. PARKES Review	ewed I	ву: /	93		
											Drilling Contractor: $\Im \xi \gamma$					
											Drill Rig Type/Method: Hand	me	_			
											Drillers Name: Alex F	J		_		
											Borehole Diam./Drill Bit Type:	Tot	al De	pth	3.9	5 ¹
											3.5"					
					Site S	Sketch	1 Мар				Sampler Type: M/A					
	Dept	h to 1	st Wa	ater (又):	_		Time	e/Date	ə: 🛩	Drill Start Time/Date: ルリトと Drill	Finish	Time	/Date	: 10/	1106
	Dept	h to V	Vater	After	Drillin	g (Y)):	Time	e/Date	ə: ~	, , , , , , , , , , , , , , , , , , ,				, , . 	
	Dept	h to o	ther \	Vater	Beari	ng Zo	nes:	_			Soil Boring Backfill Time/Date: (الراز)	1/06				
				ڃ.	alysis	Size				Surface	E VEGATATION DRY W		Estir	nated	% Of	;
		terval	d (in.)	nts / 6	or An	pe &	iller	et)	T J					Sand		
	Depth to 1st Water Af Depth to other Was Sample Interval (in.)	Coul	ined f	ng Ty	Ilus F	th (Fe	S Soi	0.110		le/	Se	ium		Silt/clay		
Project: SSFL GROWP 1 A Job #: 1881585 Site: 1111 V Logged By: J. PARKES Reviewed By: A Drilling Contractor: Jr. Drill Rig Type/Method: Many Anger Drillers Name: A L& F Borehole Diam/Drill Bit Type: Borehole Diam/Drill Bit Type: Total De Site Sketch Map Depth to 1st Water (\(\mathbb{Z}\): — Time/Date: — Drill Start Time/Date: \(\lambda\) Jr. Depth to Water After Drilling (\(\mathbb{Y}\): — Time/Date: — Well Completion Time/Date: \(\lambda\) Jr. Depth to other Water Bearing Zones: — Soil Boring Backfill Time/Date: \(\lambda\) Jr. Depth to other Water Bearing Zones: — Soil Boring Backfill Time/Date: \(\lambda\) Jr. Soil Description	Med	Fine	Silt/													
Project SST GROUP 1A John 18/18/15/5 Site: IV Logsed By: 1 PACKES Reviewed By: 10 Drill Rig Type/Method: 1/4/15 Drill Rig Type/Method: 1/4/15 Borehole Diam Joriil Bit Type: Site Sketch Map Sampler Type: IV A Depth to 1st Water (X): — Time/Date: — Drill Start Time/Date: 1/4/15/15 Drill Finish Time/D Depth to water Water Boaring Zones: — Woll Completion Time/Date: 1/4/15/15 Depth to other Water Boaring Zones: — Soil Boring Backfill Time/Date: 1/4/15/15 Depth to other Water Boaring Zones: — Soil Boring Backfill Time/Date: 1/4/15/15 Soil Description S		0	70	30												
Job #: 68 SLS Site: 111			70													
Project SST GROWN IN JOB # 180 Site 1 AV Job # 180 Site 1 AV Logged By: 1 PACKES Raviewed By: 25 Drilling Contractor: 25 Drilling Contractor: 25 Drilling Contractor: 25 Drilling Contractor: 25 Drill Rig Type/Method: 1 And 1 Anger Drillers Name: Alex Borenol Diam Jorill Bit Type: 35 Total Dopil Contractor: 25 Drill Finish Time/Date: 10 July 10 Dopit to 1st Water (\(\frac{1}{2}\)): Time/Date: - Drill Start Time/Date: 10 July 10 Dopit to Water After Drilling (\(\frac{1}{2}\)): Time/Date: - Well Completion Time/Date: 10 July 10 Dopit to other Water Bearing Zones: - Soil Boring Backfill Time/Date: 10 July 10 Dopit to other Water Bearing Zones: - Soil Boring Backfill Time/Date: 10 July 10 Dopit to other Water Bearing Zones: - Soil Boring Backfill Time/Date: 10 July 10 Dopit to 1 Bit 10 Dopit to other Water Bearing Zones: - Soil Description Soil Descr																
Site Sketch Map Depth to 1st Water (\(\mathbb{Z}\)): Time/Date: Drill Rig Type/Method: Plan Ample Plan Pl																
Job #:			0	%0	20											
12:20	Depth to 1st Water (\(\sigma\) Depth to Water After Dr Depth to other Water Be Recovered (in.) Blow Counts / 6 in.							3			•	_				
				ļ				4								
			ļ		·					BEDRO	K REFUSAL @ 3.5'					
								5 —		SAMPLE	3 0.5 \$ 5.0					
				 												
								6								
								7-							ļ	
		 						·								
			-	-		-		8 —			100 - 11 - 11 - 11 - 11 - 11 - 11 - 11				<u> </u>	
												-				
				-				9 —							ļ <u>.</u>	
								10								
			ļ									_				
(!		11 –	-			-			-	
A section of the sect		 										-				
	<u> </u>	<u> </u>				1	<u> </u>	12	J			1		<u></u>	Щ_	<u></u>

	MW					4-15	41- 750 -	Boring ID: HVBF33A					
Borehole							th (ft): 5						_
Northing (055.97				t): 179 6						
Drill Start			1-2009				e: NR	Logged By: A. Goldenberg Reviewed By: V. Vatha		n, P	G.		
Drill Finish	n Date:	10-0	2-2009	9			ne: NR	Drilling Contractor: Envirosolve Field Instrumentation: N	I/A				
Depth 1st	H ₂ O (f	t):		N/A	Da	ate / Tin	ne: N/A	Drill Rig Type/Method: Hand Auger					
Depth H ₂ 0	h H ₂ O After Drilling (ft): N/A Date / Time: N/A Driller's Name: ments: Bare soil at surface Well Comp. Date: N/A Co							Driller's Name:					
Comment	s: Bar	e soil	at sur	face				Well Comp. Date: N/A Completion 1	Time:	: N	I/A		
Samplers	Gra	b san	nple co	ollect	ted in (6-inch s	stainless	steel sleeve Soil Backfill Date: 10-02-2009 Backfill Time	:	1	1:00		
<u>8</u>							_		E	Est.	% of	So	il
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
S S	S				0- - 1-		SM	Silty Sand, dark yellowish brown (10YR 4/6), medium dense, dry, no odor, no staining [Fill] Silty Sand, dark yellowish brown (10YR 4/6), medium dense, moist, roots and rootlets, no odor, no staining [Colluvium]		5	25	35	
					2-			Sandstone, very pale brown (10YR 7/4), weathered, hard, moist [Chatsworth Formation]					
S					3-			[Chaisworth Formation]					
					4-								
					5-			Total Depth = 5.0 ft; refusal on Chatsworth Formation Sandstone. Collected soil samples S001 at 10:18 (extra volume collected at 12:56 on					
					6-			11-2-2009) and S002 at 10:40. Backfilled with auger cuttings.					
					7-								
					8-								
					9-								
					10-								

Rorch	_	VI VV Diam.		:			tal Don	th (ft): 2		Boring ID: HZB Project: SSFL ISRA	Sampling - Outfa	all OOR Aros						
										•			ny Vallay Car	.th				
North				4 000				t): 1795		Job Number: 1891614			py Valley Sou					_
		Date:						: 10:5		Logged By: A. Leavi			By: B. Marta		P.G.			
		Date:						ne: 11:0		Drilling Contractor: B.I		Field Instr	umentation: I	PID				—
		H ₂ O (f	•		N/A			ne: N/A		Drill Rig Type/Method:								_
) After						ne: N/A	[Driller's Name: Ben C			T -					
						_	el at sur				Well Comp. Date Soil Backfill Date		Completion			I/A		
	lers	Har	nd trov	vel (sc	oil pla	ced ir	1 stainle	ess stee	l sleeve)	Backfill Time			1:05					
Sample interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		C	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s 0.0 SM Silty suba							SM	subangular to	ith Gravel, dark yellowis o rounded gravel, weak	cementation, pla	nt debris [Fill]		20	5	25	25	2
						2-		SM	rounded grav	ark yellowish brown (10 vel, weak cementation = 2.3 ft; refusal on weak	[Possible Alluvium	1]		5	5	30	30	3
						-				isione.								
									Collected soi	il sample S001 (1 sleev	/e) at 11:01.							
						3-			Backfilled wit	th auger cuttings.								
						3			Backinica Wii	ar auger cattings.								
						_												
						4												
						_												
						5-												
						6												
						_												
						7												
						-												
						8												
						9-												
						_	_											
					1 1		1		l						1	i		

Borok	_	MW Diam				Т-	tal Dan	th (ft\. 4		Boring ID: HZB : Project: SSFL ISRA		I NNS Area						_
		Diam.						th (ft): 1			Sampling - Outfal			.41-				_
Northi		π): Date:		754.34				t): 1795		Job Number: 1891614			py Valley Sou		n c			_
		Date:		4-2009				e: 11:4 : ne: 11:5 :		Logged By: A. Leav			By: B. Marta		P.G	•		
					N/A					Drilling Contractor: B.		Fleid Instr	umentation: I	PID				_
		H₂O (f D After						ne: N/A		Drill Rig Type/Method: Driller's Name: Ben 0								_
							vy vege			Driller's Name: Ben C	Well Comp. Date:	N/A	Completion	Time		N/A		
									l sleeve)		Soil Backfill Date:		Completion Backfill Time			N/A 1:52		_
	1015	. па	iu trov	vei (SC		aceu II	Stairii		i Sieeve)		Soli Backilli Date.	02-24-2009	Dackilli Tilli			% of		٠il
Sample Interval Retained	SM Silty Sand, dark yellov						USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand		
	S	S 0.0 SM Silty cem						SM	cementation	ı, abundant plant debris	s [Alluvium]					30	35	;
								Total Depth = 1.0 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 (1 sleeve) at 11:48.										
						-												
						2-												
						_	1											
						3-	-											
						_												
						4	1											
						_												
						_												
						5	1											
						-												
						^												
						6-]											
						-	1											
						7-]											
						,												
						-	1											
						8-												
						-	1											
						9-												
						_												
	- 1			1	1 1	10-	1		l					1	1	1		- 1

	MW								Boring ID: HZB								
orehole	Diam.	(in.): 3					th (ft): 2		Project: SSFL ISR	A Sampling - Outfal	l 008 Area						
lorthing	(ft):	2667	12.61		Ea	sting (ff	:): 179	5850.90	Job Number: 189161	4	Site: Hap	py Valley Sou	ıth				
rill Start	Date:	02-2	4-2009	9	Sta	art Time	: 10:2	3	Logged By: A. Lea	vitt	Reviewed	By: B. Marta	asin,	P.G			
rill Finis	h Date	: 02-2	4-2009	•	Fir	nish Tim	ne: 10:3	1	Drilling Contractor: B	L. Hall	Field Instr	umentation: I	PID				
epth 1s	t H ₂ O (1	ft):		N/A	Da	ate / Tim	ne: N/A		Drill Rig Type/Method	: Hand Auger							
epth H ₂	O After	Drillin	g (ft): I	N/A	Da	ate / Tim	ne: N/A		Driller's Name: Ben	Cisneros							
ommen	ts: Veç	getatio	n at s	urfac	е					Well Comp. Date:	N/A	Completion	Time	e: 1	I/A		
amplers	: Hai	nd trov	vel (so	oil pla	ced ir	n stainle	tainless steel sleeves) Soil Backfill Date: 02-24-2009 Backfill										
5																So	il
Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			o Gravel	Coarse Sand	08 Med. Sand	Fine Sand	10,71.0
s			0.0		1- 2- 3-		SM									30	
					4												
					9-												

<u> Ψ</u>	_	MW				1_		u /#: -		Boring ID: HZB								—
		Diam.						th (ft): 1			Sampling - Outfal							_
Northi				23.70				t): 1795		Job Number: 1891614			py Valley Sou					
		Date:		4-2009				e: 11:3		Logged By: A. Leav			By: B. Marta		P.G.			
		n Date:						ne: 11:4		Drilling Contractor: B. Drill Rig Type/Method:		Field Instr	umentation:	PID				_
		H ₂ O (f			N/A		ate / Tim						—					
		O After					ate / Tim	ne: N/A						_				
		s: Veg								Completion			N/A					
	lers	: Har	nd trov	vel (sc	oil pl	aced in	n stainle	ess stee	l sleeve)		Soil Backfill Date:	02-24-2009	Backfill Tim			11:43		.:.
Sample Interval Retained	0 SM S										Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.1		1-			Silty Sand, s plant debris	strong brown (7.5YR 4/6 [Alluvium]	5), medium dense, i	noist, weak cer	nentation,			35	35	
						_			Total Depth	= 1.5 ft; refusal on wea	thered Chatsworth	Formation Sand	dstone.					Ī
									Collected so	oil sample S001 (1 slee	ve) at 11:39							
						2-					10) at 11.00.							
									Backfilled w	ith auger cuttings.								
						_												
						3-	1											
						_												
						4	1											
						-												
						_												
						5-	1											
						-												
						_												
						6-	1											
						-												
						7												
						7-												
						-	1											
						8-]											
						0												
						-	1											
						9-												
						3												
						-												
				Ì	1 1	10-			1					1	1	1	1	J

	MW					4-1.5	41- 750	_	Boring ID: HZBS		000.4						
Borehole							th (ft): 1			Sampling - Outfall							_
Northing			149.85				t): 1795		Job Number: 1891614			ppy Valley Sou					_
Orill Start			4-2009				e: 08:2		Logged By: A. Leavi		Reviewed	d By: B. Mart	asin,	P.G	•		
Orill Finis	h Date	: 02-2	4-2009)			ne: 08:2	5	Drilling Contractor: B.L	Hall	Field Inst	rumentation:	PID				
Depth 1s	t H ₂ O (1	ft):	<u> </u>	N/A	Da	ate / Tin	ne: N/A		Drill Rig Type/Method:	Hand Auger							
Depth H ₂	O After	Drillin	g (ft): N	N/A	Da	ate / Tin	ne: N/A										
Commen	ts: Gre	en ve	getatio	n at	surfac	е			Completion	Time	e: I	N/A					
Samplers	: Har	nd trov	vel (so	il pla	aced ir	1 stainl	Backfill Tim	e:		08:30)						
e La													1	Est.	% of	So	il
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
S			0.0		1-		SM	Silty Sand, s plant debris	strong brown (7.5YR 4/6 [Alluvium]	i), medium dense, m	oist, weak ce	mentation,			40	30	3
					-	SWARE		Total Depth	= 1.5 ft; refusal on weat	thered Chatsworth F	ormation San	idstone.					t
								-									
					2-				oil samples S001 (1 slee	ve) and duplicate Di	oo i (i sieeve	j αι υο.∠υ.					
								Backfilled w	ith auger cuttings.								
					_]											
					3-	-											
					-	1											
					4												
					•												
					_												
					5												
					•												
					-	1											
					6-												
					•												
					-												
					7-												
					•												
					-												
					8-												
					•												
					-												
					9-												
					•												
					-	1											
	1		1	ı I	10-	1		1					1	1	1		1

Porch	_	MW Diam				-	tal Dar	th (#\). ^		Boring ID: HZB Project: SSFL ISRA		I 000 Augs						
		Diam.						th (ft): 0			Sampling - Outfal			-41-				_
Northi				40.52				t): 1795		Job Number: 1891614			py Valley Sou		D O			_
		Date:		5-2009				e: 12:5		Logged By: A. Leav		1	By: B. Mart a		P.G	•		
		Date:						ne: 13:0		Drilling Contractor: B.		Field Instr	umentation:	PID				
		H ₂ O (f	•		N/A		Date / Time: N/A Drill Rig Type/Method: Hand Auger											_
) After					ate / I in	ne: N/A		Driller's Name: Ben C		NI/A	0	T :		1/4		
		s: Veg							el sleeves)		Well Comp. Date:		Completion			N/A 13:01		
	lers	паг	iu trov	vei (SC	l Di	aceu II	Stairii		i sieeves)		Soil Backfill Date:	02-25-2009	Backfill Tim			% of		
Sample Interval Retained Sample Interval Retained Sample Type Sample Type Count/6" Mater Level Water L								Gravel	Coarse Sand	Med. Sand	Fine Sand							
	s			0.0		-	•	SM	Silty Sand, y plant debris	rellowish brown (10YR [Fill]	5/6), medium dense	e, moist, weak o	ementation,	10	5	30	30	2
									Total Depth	= 0.8 ft· refusal on wea	thered Chatsworth	Formation Sand	dstone					+
						1-	Total Depth = 0.8 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 (2 sleeves) at 12:58.											
									Collected so	oii sampie 5001 (2 siee	ves) at 12:58.							
						-			Backfilled wi	ith auger cuttings.								
						2-												
						_												
						3-												
						_												
						4												
						4												
						-												
						5-												
						_]											
						6-												
						-	-											
						7-												
						7-												
						-	-											
						8-												
						_												
						9-												
						_												
					1		1							1	1	1		-1

		H				tal D -	4b /£4\- •		Boring ID: HZBS		000 4						_
Borehole							th (ft): 0			Sampling - Outfall							_
lorthing (05.59				t): 1796		Job Number: 1891614			py Valley Sou					_
orill Start			5-2009				e: 12:4		Logged By: A. Leavi			By: B. Marta		P.G.			
rill Finis							ne: 12:5		Drilling Contractor: B.L		Field Instr	umentation: I	PID				_
epth 1st		_		N/A			ne: N/A		Drill Rig Type/Method:								_
epth H ₂ 0						te / Tin	ne: N/A		Driller's Name: Ben C								
Comment	s: Ro a	ıd grav	vel on	surf	ace					Well Comp. Date:	N/A	Completion	Time		I/A		_
Samplers	: Har	d trov	vel (sc	il pl	aced ir	stainl	ess stee	l sleeve)		Soil Backfill Date:	02-25-2009	Backfill Time			2:52		
Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
⊗ s			0.0		U		SM		ellowish brown (10YR 5	5/6), medium dense	, moist, weak o	ementation	10	5	30	30	1
					1-			Sandstone. Due to shall	= 0.2 ft (2 in.); refusal o ow bedrock, a surface s soil from 0-0.2 ft bgs. C	ample was collecte	d by filling a sta	ainless steel					
					2-												
					3-												
					4-												
					5-												
					6-												
					7-												
					8-												
					9-												
					-												

Borok	_	VI W				Т-	tal Dan	th (ft): 4		Boring ID: HZB: Project: SSFL ISRA	Sampling - Outfall	OOR Area						_
								th (ft): 1					mVallaCa.	.41.				_
Northi				68.62				t): 1795		Job Number: 1891614			py Valley Sou		D C			_
		Date:		5-2009				e: 13:1 ne: 13:1		Logged By: A. Leavi			By: B. Marta		P.G.			_
		n Date:								Drilling Contractor: B.I		Field Instri	umentation:	עוץ				_
		H₂O (f D After			N/A			ne: N/A		Drill Rig Type/Method: Driller's Name: Ben C								_
		s: Veg					ate / Tirr	ie: N/A		Dniler's Name: Ben C	Well Comp. Date:	NI/A	Completion	Time		N/A		_
								4	ul alegues)				•					_
	iers:	паг	ia trov	vei (SC	li pi	aced II	Staini		el sleeves)		Soil Backfill Date:	02-25-2009	Backfill Tim			3:18 % of		:1
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		1-		SM	cementation	dark yellowish brown (10 n, plant debris [Alluvium] = 1.2 ft; refusal on wea				5	5	30	30	,
						=	_		Collected so advanced to	oil sample S001 (2 sleev total depth on 02-25-20	ves) on 02-24-2009 009.	at 14:45. Borin	ig was					
						2-	_			ith auger cuttings.								
						-	-											
		3-																
	4-				-													
					4	-												
						5-	-											
						6-	-											
						7-	-											
	1				8-	-												
						-	-											
						9-												
						10-												

<u> </u>	_	VI W				- -	4-1 5	4h /ft\ *		Boring ID: HZBS		1.000 4						—
		e Diam. (in.): 3 Total Depth (ft): 1.9 g (ft): 266991.26 Easting (ft): 1795894.72 rt Date: 02-25-2009 Start Time: 13:04									Sampling - Outfal		.,					—
										Job Number: 1891614			py Valley Sοι					—
										Logged By: A. Leavi			By: B. Mart a		P.G	•		
		n Date:						ne: 13:0		Drilling Contractor: B.L		Field Instr	umentation: I	PID				
		H₂O (f	•		N/A			ne: N/A		Drill Rig Type/Method:								_
		O After					ate / Tin	ne: N/A		Driller's Name: Ben C								
Comn	nent	s: Veg	etatio	n at s	urfac	e					Well Comp. Date:	N/A	Completion	Time	e: 1	N/A		
	lers	: Han	nd trov	vel (so	oil pla	aced ir	1 stainl	ess stee	l sleeves)		Soil Backfill Date:	02-25-2009	Backfill Time			3:11		
Sample Interval Retained	Sample Type	rery	.9/	(md	Water Level	(feet)	Graphic Log	USCS Soil Classification		С	Description				Sand	Sand %		
Sample III	Samp	Recovery (%)	Blow Count/6"	PID (ppm)	Water	Depth (feet)	Grapt	USCS	0:11 0 1	40/7	-(0)	.,		Gravel	Coars	Med. Sand	Fine Sand	
	S	0				SM	plant debris	ellowish brown (10YR 5 [Alluvium]	oo), mealum dense	e, moist, weak c	ementation,	5		35	35	4		
						2-	NAME OF STREET		Total Depth	= 1.9 ft; refusal on weat	thered Chatsworth	Formation Sand	dstone.					t
									Collected so	il sample S001 (2 sleev	es) at 13:06.							
					_			Backfilled wi	th auger cuttings.									
					3-													
		3-																
		4-																
						_												
						5-												
						_	1											
						6-												
						_												
						_												
						7-												
						8-	1											
						_												
						9-	1											
						_												
					1 1													

<u> </u>	_	MW				1_				Boring ID: HZBS								—
		Diam.						th (ft): 1			Sampling - Outfall 0							_
North				47.57				t): 1796		Job Number: 1891614			ppy Valley Sοι					_
		Date:		5-2009			art Time			Logged By: A. Leavi		Reviewed	By: B. Mart a	asin,	P.G.			
Orill F	inisl	n Date:	02-2	5-2009	•			ne: 12:4	4	Drilling Contractor: B.L	Hall	Field Inst	rumentation: I	PID				
		H ₂ O (f			N/A	Da	te / Tim	ne: N/A		Drill Rig Type/Method:	Hand Auger							_
Depth	n H₂C	O After	Drilling	g (ft): N	N/A	Da	te / Tim	ne: N/A		Driller's Name: Ben C	isneros							
Comr	nent	s: Veg	etatio	n and	road	l grave	l at sur	rface			Well Comp. Date: I	N/A	Completion	Time	: N	I/A		
Samp	lers	Har	d trov	vel (so	il pla	aced ir	stainle	ess stee	l sleeve)		Soil Backfill Date: (02-25-2009	Backfill Time	e:	1	2:46	i	
ā		a								Est.	% of	So	il					
 Sample Interval Retained 	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			•			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		1-		SM	plant debris					10	5	30	30	2
						_			Total Depth	= 1.3 ft; refusal on weat	hered Chatsworth Fo	ormation San	dstone.					Г
									Collected so	il sample S001 (1 sleev	re) at 12:42.							
						_					•							
						2-			Backfilled W	ith auger cuttings.								
						_												
		3-																
		3-																
		3-																
						4-												
						_												
						5-												
						_												
						6-												
						_												
						_												
						7-	1											
						_												
						8-	1											
						-												
						^												
						9-												
						_												

Borehole Diam. (H in): 3		Т	otal Don	th (ft): 2	Boring ID: HZBS (2.4 Project: SSFL ISRA S	ampling - Outfall 0	NS Aros						
		-0.07					ampling - Outrall u			41-				
Northing (ft):	26705				t): 179 6				py Valley Sou					
Drill Start Date:					e: 08:4	90 ,			By: B. Marta		P.G.			
Drill Finish Date:					ne: 08:5			Field Instr	umentation:	PID				
Depth 1st H ₂ O (fr	-	N/			ne: N/A									_
Depth H ₂ O After				ate / Tin	ne: N/A				1					
Comments: Roa							Well Comp. Date: N		Completion	Time		N/A		
Samplers: Han	d trow	el (soil	placed	in stainl	ess stee	el sleeves)	Soil Backfill Date: 0	2-24-2009	Backfill Time			9:00		
Sample Interval Retained Sample Type Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Graphic Log	USCS Soil Classification	De	scription			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s					SM	Silty Sand, yellowish brown (10YR 5/6 plant debris [Fill]		noist, weak c	ementation,	10	10		30	3
	2— To					Tabl Doth Odforford a supply		and the Control						
	-					Total Depth = 2.4 ft; refusal on weather		rmation Sand	dstone.					
	3_					Collected soil sample S001 (2 sleeves	s) at 08:47.							
						Backfilled with auger cuttings.								
			4 5 6											

	Ή					Boring ID: HZBS0073a					
Borehole Diam.					th (ft): 2	·					
Northing (ft):	2670				t): 179 6						
Drill Start Date:					e: 14:2	Logged By: B. Martasin, P.G. Reviewed By: B	Martasin	, P.G	ì		
Drill Finish Date:	03-20)-2009	Fi	nish Tin	ne: 14:2	Drilling Contractor: B.L. Hall Field Instrumenta	on: N/A				
Depth 1st H ₂ O (f	t):	N/A	A D	ate / Tin	ne: N/A	Drill Rig Type/Method: Hand Auger					
Depth H₂O After	Drilling	(ft): N/	A D	ate / Tin	ne: N/A	Driller's Name: B. Martasin					
Comments: Veg	etation	and ro	ad grav	el at su	rface	Well Comp. Date: N/A Com	etion Tim	ie:	N/A		
Samplers: Gra	b from	auger l	head			Soil Backfill Date: 03-20-2009 Back	Il Time:		14:30)	
terval /pe				: Log	soil	Description		_	% o		
Sample Inters Retained Sample Type Recovery (%)	Blow Count/6"	PID (ppm)	Depth (feet)	Graphic Log	USCS Soil Classification	·	Gravel	_		Fine Sand	
			1-		SM	Silty Sand, yellowish brown (10YR 5/6), medium dense, moist, rootlets [Alluvi	m] 10	0 10	20	30	
s			2-			decrease in gravel, sand grades slightly finer	5	5	25	35	;
						Total Depth = 2.4 ft; refusal on weathered Chatsworth Formation Sandstone.					
						Collected soil sample S002 at 14:25.					
	3-					Backfilled with auger cuttings.					
			5- 6- 7-								

<u> Ψ</u>		IW				Π_				Boring ID: HZBS								_
			in.): 3					th (ft): 2			Sampling - Outfall							_
Northi				20.30				t): 1796		Job Number: 1891614			ppy Valley Sou					_
				5-2009				e: 11:5		Logged By: A. Leavi			By: B. Mart a		P.G.			_
				5-2009				ne: 11:5		Drilling Contractor: B.L		Field Instr	rumentation: I	PID				_
Depth					N/A			ne: N/A		Drill Rig Type/Method:								_
				g (ft): N			te / Tin	ne: N/A		Driller's Name: Ben C								_
				n at sı							Well Comp. Date:		Completion	Time	: N	I/A		_
	ers:	Han	d trov	vel (so	il pla	aced ir	stainl	ess stee	l sleeve)		Soil Backfill Date:	02-25-2009	Backfill Time			1:57		_
Sample Interval Retained	Sample Type Recovery	(%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			escription			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		1-		SM	plant debris					5		30	35	
						_				= 2.2 ft; refusal on weat		-ormation San	astone.					
									Collected so	il sample S001 (1 sleev	e) at 11:52.							
						_			Backfilled wi	th auger cuttings.								
	3- Backfilled																	
						_												
						4												
						_												
						5-												
						_												
						6-												
						_												
						7-												
						_												
						8-												
						_												
						9-												
						_												
														1				
															1			j.

<u> </u>	_	VI W					4-1.5	41 /£1\ •		Boring ID: HZB		1.000 4						—
		Diam.						th (ft): 1			Sampling - Outfal							_
Northi				179.46				t): 1796		Job Number: 1891614			py Valley Sou		D O			_
		Date: n Date:		5-2009				e: 13:3 5 ne: 13:4 5		Logged By: A. Leav		I	By: B. Mart umentation:		P.G	•		
					N/A					Drilling Contractor: B.		Fleid instr	umentation:	PID				_
		H₂O (f D After						ne: N/A		Drill Rig Type/Method: Driller's Name: Ben (_
							ate / Tirr	ne: N/A		Dniler's Name: Ben C		NI/A	Completion	Time		N/A		_
		s: Veg					4	4	l alaava\		Well Comp. Date:		1					
	iers	паг	ia trov	vei (SC)II DI	aced II	Staini		l sleeve)		Soil Backfill Date:	02-25-2009	Backfill Tim			13:44 % of		.il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		1-		SM	Silty Sand, d cementation	dark yellowish brown (1 ı, plant debris [Alluvium	0YR 4/4), medium 0]	dense, moist, w	eak	5	5	30	30	
						-	15384646		Total Depth	= 1.5 ft; refusal on wea	thered Chatsworth	Formation Sand	dstone.					t
						2-				oil sample S001 (1 slee	ve) at 13.40.							
									Backfilled wi	ith auger cuttings.								
						_												
		3-																
		3-																
		3-																
						4-	1											
						_												
						5-	1											
						-												
						-												1
						6-	1											
						-												
						_												
						7-	1											
						-												
						0												
						8-]											
						-												
						9-]											
						9-												
						-												1
				l .	1 1	10-	1							1	1	1	I	-1

Boreh	_	MW Diam		<u> </u>		T-	tal Dan	th (ft): 0		Boring ID: HZB Project: SSFL ISRA		008 Araa						
		Diam.									Sampling - Outfal			.41.				_
North				157.78				t): 1796		ob Number: 1891614			py Valley Sou					_
		Date:		5-2009				: 10:3		ogged By: A. Leavi		I	By: B. Marta		P.G	•		
		h Date:						ne: 10:3		Orilling Contractor: B.I		Field Instr	umentation: I	עוץ				_
		H ₂ O (f			N/A			ne: N/A		orill Rig Type/Method:								_
		O After					ite / Tim	ne: N/A	וט	oriller's Name: Ben C		NI/A	0	T :		1/4		
		s: Veç					4.!1		1 -1>		Well Comp. Date:		Completion			N/A		
	olers	: Har	ia trov	vei (sc	on pi	aced ir	staini		l sleeve)		Soil Backfill Date:	02-25-2009	Backfill Time			10:41 % of		
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s			0.2				SM	Silty Sand, da cementation,	rk yellowish brown (1) plant debris [Alluvium	DYR 3/4), medium c]	lense, moist, we	eak	5	5	30	35	2
\boxtimes						-			Total Denth =	0.5 ft; refusal on wea	thered Chatsworth	Formation Sand	Istone					+
										sample S001 (1 sleev		0						
						1-					76) at 10.55.							
									Backfilled with	n auger cuttings.								
						-												
						2-												
						_												
						_												
						3-												
						_												
						4-												
						_												
						5												
						_												
						6-												
						-												
						_												
						7-												
						-												
						8-												
						0-												
						-												
						9-												
						3												
						-												
		- 1		1	1 1	10-	1							1	1	1		1

	Boring ID: HZBS0077 Project: SSFL ISRA Sampling - Outfall 008 Proj																	
															_			
													ppy Valley Sοι					
		Date:		5-2009			art Time			Logged By: A. Leavi		Reviewed	d By: B. Mart a	asin,	P.G	•		
Drill I	inis	n Date:	02-2	5-2009)	Fir	nish Tin	ne: 10:2	20	Drilling Contractor: B.L	Hall	Field Inst	rumentation: I	PID				
Dept	h 1st	H ₂ O (f	t):		N/A	Da	ate / Tin	ne: N/A		Drill Rig Type/Method:	Hand Auger							
Dept	h H ₂ (O After	Drilling	g (ft): N	N/A	Da	ate / Tin	ne: N/A		Driller's Name: Ben C	isneros							
Com	men	s: Sur	face c	overe	d wit	h heav	vy vege	tation			Well Comp. Date	e: N/A	Completion	Time	e: I	N/A		
Sam	olers	: Har	nd trov	vel (so	il pla	aced in	n stainle	ess stee	el sleeves)		Soil Backfill Date	e: 02-25-2009	Backfill Time	e:	1	10:22	2	
व								_							Est.	% of	f So	il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			escription			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		1-		SM	plant debris	very dark brown (10YR 2 [Alluvium] = 1.0 ft; refusal on weat					5	30	35	3
									Collected so	oil sample S001 (2 sleev	res) at 10:16							
						-					25, 40.10.10.							
									Backfilled w	ith auger cuttings.								
						2-	+											
						_												
						3-	1											
						_												
						4	1											
						-	-											
						_												
						5-	1											
						-												
						_												
						6	1											
						-												
						7-]											
						,												
						-	†											
						8-												
						-												
						-	1											
						9-												
						-	1											
					ı I	10-	1		I.					1	1	1		

of So	10:: St. % Coarse Sand 5: 3	Es
of So Sand 30	Coarse Sand Sand Sand Sand Sand Sand Sand Sand	Es
of So Sand 30	Coarse Sand Sand Sand Sand Sand Sand Sand Sand	Es
of So Sand 30	10:: St. % Coarse Sand 5: 3	Es
of So Sand 30	10:: St. % Coarse Sand 5: 3	Es
of So Sand 30	10:: St. % Coarse Sand 5: 3	Es
of So Sand 30	10:: St. % Coarse Sand 5: 3	Es
of So Line Sand	Coarse Sand	
Sine Sand	Coarse Sand	
		_
35	3	
1		

									Boring ID: HZBS								
		(in.): 3					th (ft): 1			Sampling - Outfall 0							_
thing			161.08				1796		Job Number: 1891614			ppy Valley Sou		D ~			_
		02-2 e: 02-2					e: 09:1 :		Logged By: A. Leavi Drilling Contractor: B.L			d By: B. Marta rumentation:		P.G.			
	sn Date st H₂O			9 N/A			ne: N/A	4	Drill Rig Type/Method:		Fleid Inst	rumentation:	PID				
		r Drillin					ne: N/A		Driller's Name: Ben C								
		een ve			•		IC. IVA		Dillier's Name. Den C	Well Comp. Date: N	N/A	Completion	Time	· •	N/A		
npler							ess stee	l sleeves)		Soil Backfill Date: (Backfill Tim			9:28	3	
								,						Est.			il
je O				<u>_</u>	ਦੁ	go	_io							Sand			
Retained Sample Type	Recovery (%)		PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		D	escription				SS	Med. Sand	Fine Sand	;
Retained Sample Ty	- 8	Blow Count/6"	₫	ē	뒱	phi	SSif			-			Gravel	Coarse (S	ŝ	V.C. 0/41:0
Ret San	8€ %	58	윤	Nat) Je	Gra	Cla						Gra	ပ္ပိ	Mec	Ë	1
	-		_	-	- 0-	3333	SM	Silty Sand	dark yellowish brown (10	YR 4/4) medium de	nse moist v	/eak	5	5	30	30	
s			0.0				•	cementation	n, plant debris [Alluvium]	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,, .						
					-												
					1-												
					-												
					1												
						ustv4stku:		Total Depth	n = 1.8 ft; refusal on weat	hered Chatsworth Fo	ormation San	dstone.					\dagger
					2-												
								Collected S	oil sample S001 (2 sleev	es) at 09:21.							
	- Backfilled							Backfilled v	vith auger cuttings.								
	3-																
	3-																
	3-																
					4-												
					+												
					5-												
					6-												
					+												
					7-												
	8-																
					+												
					9-												
					•												
	1	1	1	1 1	-	ı		i i					1	1	1	1	1

	MW				1_	4-15	41- 750 -		Boring ID: HZB		1.000.1					
Borehole							th (ft): 2			Sampling - Outfal						
Northing (161.08				t): 1796		Job Number: 1891614			py Valley Sou				
orill Start							e: 14:1			sin, P.G.	Reviewed	By: B. Marta	asin,	P.G		
rill Finisl	n Date:	03-2	0-2009	9			ne: 14:1 :		Drilling Contractor: B.		Field Instr	umentation: I	N/A			
epth 1st				N/A			ne: N/A	II	Drill Rig Type/Method:							
epth H ₂ 0						ate / Tin	ne: N/A		Driller's Name: B. Ma							
Comment										Well Comp. Date:	N/A	Completion	Time	e: 1	I/A	
Samplers	Gra	b fron	n auge	er hea	ad			11		Soil Backfill Date:	03-20-2009	Backfill Time			4:20	
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Silty Sand o		Description	pist rootlets [All	uviuml	Gravel	Coarse Sand	Med. Sand	Soil Sand 30
S					1-		SM	Silty Sand, o	dark yellowish brown (1	JYR 4/4), loose, m	oist, rootlets [All	uvium]	5	5	30	30
					2-	interests.		Total Depth	= 2.0 ft; refusal on wea	thered Chatsworth	Formation Sand	dstone.				
								Collected so	oil sample S002 at 14:1	5						
					-	1				J .						
								Backfilled wi	ith auger cuttings.							
					3-											
					-	1										
					4											
					•											
					-	1										
					5											
					-											
					-	1										
					6-											
					_											
					7-											
					_											
					8-	1										
					_]										
					9-	1 1										
					_											

Boroh	_	VI W Diam.				Т-	tal Don	th (ft): 0		Boring ID: HZB : Project: SSFL ISRA	Sampling - Outfal	I NOS Aros						_
				131.94									ny Vallay Car	.4h				_
Northi								t): 1796		Job Number: 1891614			py Valley Sou		D C			_
		Date:		5-2009				: 10:0		Logged By: A. Leav			By: B. Marta		P.G			
		n Date:						ne: 10:0		Drilling Contractor: B.		Field Instr	umentation:	PID				_
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
) After					ate / Tim	ne: N/A		Driller's Name: Ben C								
		s: Veg									Well Comp. Date:		Completion			N/A		_
	lers	: Har	nd trov	vel (sc	oil pla	aced ir	n stainle	ess stee	l sleeve)		Soil Backfill Date:	02-25-2009	Backfill Tim			10:06		_
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Oith Court		Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		1-		SM	cementation Total Depth	dark yellowish brown (1 n, plant debris [Alluvium = 0.9 ft; refusal on wea] thered Chatsworth			5	5	30	30	
									Collected sc	oil sample S001 (1 slee	ve) at 10:02.							
						_			Backfilled w	ith auger cuttings.								
						2-	1											
						_												
						3-	1											
						_	1											
						4	-											
						-	1											
						5]											
						J												
						-												
						_												
						6-	1											
						_												
						_												
						7-												
						_												
						8	1											
						_	1											
						9-												
						_												
				1	1 1	10-	1		l					1	1	1	1	

Boroh	olc.	Diam	(in). 1			т-	stal Dan	th (ft): 2		Boring ID: HZB : Project: SSFL ISRA		UUS Vaca						_
		Diam.									Sampling - Outfall		www.Vallay.Cay	415				_
North				130.39				t): 1796		Job Number: 1891614			ppy Valley Sou		D	_		_
		Date:		1-2009				e: NR		Logged By: A. Gold	_	I	By: V. Vatha		ın, P	.G.		-
		h Date						ne: NR		Drilling Contractor: Er		Field Inst	umentation: I	N/A				_
		H ₂ O (f	_		N/A			ne: N/A		Drill Rig Type/Method:								_
		O After						ne: N/A	[Driller's Name: A. Go								
							surface				Well Comp. Date:		Completion			N/A		
	lers	: Gra	ıb san	ple co	ollec	ted in (6-inch s	stainless	steel sleeve		Soil Backfill Date:	10-01-2009	Backfill Time			NR.		
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		ı	Description				Coarse Sand '4	Med. Sand	Fine Sand	
San	San	% %	Cou	E G	Wat	-0 -0 -	G		0111	(40)(7) (40)		10/5 ///		Gravel	_			
	S						-	SM	Silty Sand, by dry to moist,	rown (10YR 4/3) to dar roots and rootlets, no	k yellowish brown (odor, no staining [Fil	10YR 4/4), me I]	dium dense,		10	25	20	4
	S					1		SM	Silty Sand, dano staining [0	ark yellowish brown (1 Colluvium]	OYR 4/4), dense, mo	oist, rootlets, n	o odor,		10	30	25	3
\otimes						2-			Total Depth =	= 2.0 ft; refusal on Cha	tsworth Formation S	Sandstone.						\vdash
									Collected soi	il samples S001 at 14:	35 and S002 at 14:4	5.						
						-				th auger cuttings.								
									Backilled Wil	in auger cullings.								
						3-												
						_												
						4-												
						-												
						_												
						5-												
						-												
						6-												
						-												
						7-												
						_												
						8-	1											
						-												
						^												
						9-												
						-	1											
				l	1 1	10-								1	1	1		1

<u>w</u>	_	MW		,			4-1.5	11 /£1)		Boring ID: HZBS		000 4						
		Diam.						th (ft): 1			Sampling - Outfall							_
North				35.97				t): 179		Job Number: 1891614			ppy Valley Sοι					
		Date:		5-2009				e: 09:3		Logged By: A. Leavi			d By: B. Mart a		P.G			
		h Date						ne: 09: 4		Drilling Contractor: B.L		Field Inst	rumentation: I	PID				
		: H₂O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
		O After					ate / Tim	ne: N/A		Driller's Name: Ben C								
Comr	ment	ts: Veç	jetatio	n at sı	urfac	e					Well Comp. Date:	N/A	Completion	Time	e: 1	N/A		
	olers	: Har	nd trov	vel (sc	il pla	aced ir	n stainle	ess stee	el sleeves)		Soil Backfill Date:	02-25-2009	Backfill Time			9:48		
ā								_								% of	So	il
 Sample Interval Retained 	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s			0.0		1-		SM	plant debris	/ellowish brown (10YR 5 [Alluvium] strong brown (7.5YR 4/		, moist, weak	cementation,			30	35	3
						-	SPACE		Total Depth	= 1.5 ft; refusal on weat	thered Chatsworth F	ormation San	idstone.					\vdash
									Callastad	vil comple COO1 /2 closy	(00) at 00:42							
						2-			Collected Sc	oil sample S001 (2 sleev	res) at 09.42.							
									Backfilled w	ith auger cuttings.								
						_												
						3-	-											
						_												
						4-	-											
						_												
						5-	-											
						_												
						6-												
						_												
						_												
						7-	1											
						-												
						_												
						8-	1											
						-												
						^												
						9-	1											
						-	-											
				i	i I		1		i .					1	1	1		

Borehole	Diam	(in \· 3			Ta	tal Don	th (ft): 1	n 9	Project: SSFL ISRA	Sampling - Outfall 00	18 Area						_
			33.92				tii (it): 1 t): 1796		Job Number: 1891614			v Valley Cou	4h				_
Northing (0-2009				e: 09:2 8					y Valley Sou		n D	_		_
orill Start									Logged By: A. Golde			By: V. Vatha		ın, P	.G.		
orill Finis							ne: 10:50	U	Drilling Contractor: En		Field Instru	mentation: I	N/A				
epth 1st				N/A			ne: N/A		Drill Rig Type/Method:								_
epth H ₂ 0							ne: N/A		Driller's Name: A. Gol								
Comment										Well Comp. Date: N		Completion			N/A		
	: Gra	b sam	ple co	ollecte	ed in 6	6-inch s	tainless	steel sleeve		Soil Backfill Date: 09	9-30-2009	Backfill Time			0:50		
2							_						t		% of	So	11
Sample interval Retained Sample Type	.		_	<u></u>	et)	Graphic Log	USCS Soil Classification							Sand	0	_	
Sample II Retained Sample T	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	<u> 2</u>	So			Description			_	S	Med. Sand	Fine Sand	7.010/41:0
를 별 달	8	≥ ţ	d)	ē	Ę	ם	SSi						<u>~</u>	J.S.	6	S	3
et San	% %	500	ĕ	Nat	Эе] ra	JS(Gravel	Coarse (Jec	<u>ž</u>	
×	E 5	шО	-	>	- 0–	146466	SM	Silty Sand	dark yellowish brown (10	VP 4/4) modium don	so to donco	dn.	5	10	25	30	3
S					-		SIVI	no odor, no	staining [Fill]				5				
					_		SM		strong brown (7.5YR 4/6	3), dense, moist, no od	or, no staining	g		10	20	35	3
					-			[Colluvium]									
					2-												
					_												
⊗ s					_												
					-												
					4												
					_												
					-												
					6												
					_												
					_												
					_												
					8												
					-												
					_												
					_												
					10-	1715 F 4 5		Sandstone,	very pale brown (10YR	7/4), weathered (unwe	eathered at to	tal depth),					t
					_				[Chatsworth Formation] n = 10.9 ft; refusal on con		ormation San	dstone					Ł
					-				oil samples S001 at 09:3		Jilliauon Gall	uotoric.					
					12-												
					_			Backfilled w	vith auger cuttings.								
					-	1											
					14-	1											
					_												
]											
					_	1											
					16-	1											
					-												
						1											
					_	1											
					18-	1											
					-												
I			i	1 1									1				1
					_]											
					_												

20rob		Diam	(in \- 3			т.	tal Da-	th (ft): 3		Boring ID: HZB Project: SSFL ISRA	Sampling - Outfal	I NNS Aros						_
		Diam.												41.				
Northi				04.69				t): 1796		Job Number: 1891614			py Valley Sou					
		Date:						e: 08:5		Logged By: A. Leavi			By: B. Marta		P.G.			
		n Date:						ne: 09:0		Drilling Contractor: B.I		Field Instr	umentation: I	PID				
		H ₂ O (f	•		N/A			ne: N/A		Drill Rig Type/Method:								
) After					ate / Tin	ne: N/A		Driller's Name: Ben C			_					
Comn	nent	s: Veg	etatio	n at s	urfac	е					Well Comp. Date:	N/A	Completion	Time	e: I	N/A		
	lers:	Har	nd trov	vel an	d gra	b fron	n augei	r head (p	placed in stainl	ess steel sleeves)	Soil Backfill Date:	02-25-2009	Backfill Time			9:10		
Sample interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)								Gravel	Coarse Sand	Med. Sand	Fine Sand	
გ <u>ო</u>	Š	~ ⊗	⊞ ŏ	Ы	8	۵–	ō		Silty Sand, o	lark yellowish brown (10	OYR 4/6), medium o	dense, moist, w	eak	5	5	Š	30	
	S			0.0		1- 2- 3-		SM	Silty Sand, y debris (decre	, plant debris [Possible rellowish brown (10YR seases with depth) [Alluv	Fill] 5/6), medium dense ium]	e, moist, trace to	o no plant	5	3	40		
~						4-			Collected so	= 3.7 ft; refusal on wear il samples S001 (1 slee	ve taken from hand							
						-				eve taken from auger heith auger cuttings.	ead) at 09:08.							
						5-												
						6-												
						7-												
						8-												
						9-												
						-												

	MW		,		 	tal D	th /#\· ·		Boring ID: HZBS		000 A====						_
Borehole							th (ft): 1			Sampling - Outfall							
Northing			003.47						Job Number: 1891614			ppy Valley Sou					
Drill Start	Date:	10-0	1-2009	9			e: NR		Logged By: A. Golde		Reviewed	By: V. Vatha	anas	in, P	.G.		
Drill Finis	h Date:	10-0	6-2009	9	Fir	nish Tim	ne: NR		Drilling Contractor: Env	virosolve	Field Inst	rumentation: I	N/A				
Depth 1s	t H₂O (f	t):		N/A	Da	ite / Tim	ne: N/A		Drill Rig Type/Method:	Hand Auger							
Depth H ₂	O After	Drillin	g (ft): I	N/A	Da	ite / Tim	ne: N/A	. 1	Driller's Name: A. Gol	denberg							
Commen	ts: Bar	e soil	at sur	face						Well Comp. Date:	N/A	Completion	Time	e: 1	N/A		
Samplers	: Gra	b sam	ple co	ollect	ed in 6	3-inch s	stainles	s steel sleeve		Soil Backfill Date:	10-06-2009	Backfill Time	e:	1	0:00)	
<u>a</u>							_						1	Est.	% o	So	il
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		D	escription			Gravel	Coarse Sand	Med. Sand	Fine Sand	Sil+/Clay
S					0-		SM	Silty Sand, d no staining [f	lark yellowish brown (10 Fill]	YR 4/4), dense, dry	to moist, no	odor,	5	5	25	30	3
≫ ∎s					2 —			v becomes i	moist, with roots and ro	otlets, without grave	el			10	30	25	3
					4-			√ increasing	density								
					6-												
					8-			▼ fewer root	s and rootlets								
					_			√ grades wit	thout roots and rootlets								
					10-												
					12-												
					14— -												
					16-			Sandstone, r moderately v	mottled very pale brown weathered, hard, moist [(10YR 8/3) to brow Chatsworth Format	nish yellow (1 ion]	0YR 6/8),					
					18-												
					20-			Collected soi	= 19.0 ft; terminated pri il samples S001 at 08:3 th auger cuttings.	or to refusal per Be 0 and S002 at 09:0	n Stewart. 5.						

Roreb	_	MW Diam				т.	tal Dan	th (ft): O		Boring ID: HZB : Project: SSFL ISRA		I NNR Aros						
		Diam.						th (ft): 0			Sampling - Outfal		m. Vallar Car	.41.				_
Northi				87.95				t): 1796		Job Number: 1891614			py Valley Sou		n.c			_
		Date: Date:		5-2009				e: 08:4		Logged By: A. Leaving Drilling Contractor: B.			By: B. Marta		P.G			
								ne: 08:5				Fleid instr	umentation: I	עוץ				_
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
		O After					ate / Tirr	ne: N/A		Driller's Name: Ben C		NI/A	Completion	Time		N/A		
		s: Veg					a otoini	ann atan	el sleeve)		Well Comp. Date: Soil Backfill Date:		Completion			N/A)8:55		
	iers.	Пап	ia trov	vei (Sc)II DI	aceu ii	Stairii		sieeve)		Soli Backilli Date.	02-25-2009	Backfill Time			% of		
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		·		SM	Silty Sand, y plant debris	yellowish brown (10YR : [Alluvium]	5/6), medium dense	e, moist, weak c	ementation,			35	35	; ;
						-			Total Depth	= 0.6 ft; refusal on wea	thered Chatsworth	Formation Sand	dstone.					+
						1-	_		Collected so	oil sample S001 (1 sleev	ve) at 08:51.							
									Backfilled w	ith auger cuttings.								
						-												
						2-												
						-												
						-	_											
						3	-											
						4												
						-												
						5												
						·												
						-	-											
						6-	-											
						_												
						-												
						7-												
						_												
						8-												
						-												
						9-												
						-												
					1 1	10-			[1		- [

<u> </u>	_	MW				1_		u /#: -		Boring ID: HZB		1.000.7						_
		Diam.						th (ft): 1			Sampling - Outfal							_
Northi				37.80				t): 1796		Job Number: 1891614			py Valley Sou					_
		Date:		5-2009				e: 08:3		Logged By: A. Leav			By: B. Marta		P.G.			
		h Date:						ne: 08:4		Drilling Contractor: B.		Field Instr	umentation:	PID				_
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
		O After					ate / Tim	ne: N/A		Driller's Name: Ben (_
		s: Veg									Well Comp. Date:		Completion			N/A		_
	lers	: Har	nd trov	vel (sc	oil pl	aced in	n stainle	ess stee	l sleeve)		Soil Backfill Date:	02-25-2009	Backfill Tim)8:44		_
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		1-		SM	Silty Sand, y minor plant o	/ellowish brown (10YR debris [Alluvium]	5/6), medium dense	e, moist, weak c	ementation,	5	5	30	30	
						-	2424442		Total Depth	= 1.5 ft; refusal on wea	thered Chatsworth	Formation San	dstone.					t
									•	oil sample S001 (1 slee								
						2-	1				νο) αι υσ. 4 υ.							
									Backfilled wi	ith auger cuttings.								
						_												
						3-	1											
						_												
						4	1											
						-												
						_												
						5-	1											
						-												
						_												
						6-	1											
						-												
						7-												
						7-												
						-	1											
						8-]											
						J												
						-												
						9-												
						•												
						-	1											
				1	1 1	10-	1							1	1	1	l .	J

		D:.	/: \ -				4-15	u- /60 -		Boring ID: HZBS	0	000 1						
		Diam.						th (ft): 3			Sampling - Outfall							—
lorth				937.80				t): 1796		Job Number: 1891614			opy Valley Sou					
		Date:		1-2009				e: 07:4		Logged By: A. Golde	-	I	By: V. Vatha		in, P	.G.		
		n Date:						ne: 08:1		Drilling Contractor: En		Field Inst	rumentation: I	N/A				
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
) After				•		ne: N/A		Driller's Name: A. Gol								
							surface				Well Comp. Date:		Completion	Time		N/A		
	lers	Gra	b san	ple co	llect	ed in 6	3-inch s	tainless	steel sleeve		Soil Backfill Date:	10-01-2009	Backfill Time			08:17		
<u>8</u>	e				_		D D	lon								% of	f So	╙
Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		С	escription			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	S					0- - 1- - 2-		SM	Silty Sand, d moist, roots	dark yellowish brown (10 and rootlets, no odor, n	YR 4/4), medium o o staining [Fill]	ense to dense	, dry to		10	25	35	30
	s					_			Sandstone [6	Chatsworth Formation]								_
×						3-			Total Depth	= 3.0 ft; refusal on Chat	sworth Formation S	Sandstone.						\vdash
									-									
						_			Collected so	il samples S001 at 07:5	0 and S002 at 08:1	5.						
									Backfilled wi	ith auger cuttings.								
						4-												
						-												
						_												
						5-												
						-												
						6-												
						7												
						_												
						8												
						_												
						9-												
						-												

	MW					tal D -	th (#1): 4		Boring ID: HZBS		100 A						
<u>Borehole</u>							th (ft): 1			Sampling - Outfall 0							
Northing			92.24				t): 1796		Job Number: 1891614			ppy Valley Sou					
Orill Start			5-2009			art Time			Logged By: A. Leavi			d By: B. Mart a		P.G.			
Orill Finis							ne: 12:0		Drilling Contractor: B.L		Field Inst	rumentation:	PID				
Depth 1s				N/A			ne: N/A		Drill Rig Type/Method:								
Depth H ₂							ne: N/A		Driller's Name: Ben C								
Commen										Well Comp. Date: I		Completion	Time		N/A		
	: Har	nd trov	vel (sc	il pla	aced ir	n stainl	ess stee	el sleeves)		Soil Backfill Date: (02-25-2009	Backfill Tim			2:04		
<u> </u>							_								% of	So	il
Retained Sample Interval	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
S S			0.3		_	733 •	SM	Gravel road Silty Sand, of cementation	base dark yellowish brown (10 n, plant debris [Fill]	OYR 4/4), medium de	nse, moist, v	veak	10	5	30	30	2
					1	•											
								Total Depth	= 1.1 ft; refusal on weat	hered Chatsworth Fo	ormation San	ndstone.					
					_			Collected so	oil samples S001 (1 slee	eve) and split S001SF	(1 sleeve) a	at 12:00.					
										,	, , , , , , , , , ,						
					_			Backfilled w	ith auger cuttings.								
					2-												
					-	-											
					•												
					3												
					-												
					4												
					4-												
					-	- 1											
					5												
					5-												
					-												
					6-]											
					0												
					-												
					7												
					,												
					-												
					8-												
					•												
					-												
					9												
					•												
					-												
	ı l			1	10-	1							1	1	1		1

		/WN		:		T_	tal Don	th (ft): 0		Boring ID: HZB Project: SSFL ISRA		I NNS Ares						
			(in.): 3								Sampling - Outfal			41-				_
	g (ft	i): Date:		48.98				t): 1796 e: 13:4		Job Number: 1891614			py Valley Sou		D C			_
				4-2009						ogged By: A. Leavi			By: B. Marta		P.G			
				4-2009				ne: 13:5		Orilling Contractor: B.I		Field Instr	umentation: I	עוי				_
		H ₂ O (f	•		N/A			ne: N/A		Orill Rig Type/Method:								_
				g (ft): I			ate / Tirr	ne: N/A	L	Oriller's Name: Ben C		N/A	Completion	Timo		N/A		
				n at s			o etainl	acc stan	l sleeve)		Well Comp. Date: Soil Backfill Date:					13:53	,	
piei	15.	пап	u trov	vei (Sc	JII DI	aceu ii	Stairii		i Sieeve)		Soil Backilli Date.	02-24-2009	Backfill Time			% of		
Sample Type	Sample Type	Kecovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s	s			0.2				SM	Silty Sand, da cementation,	ark yellowish brown (10 plant debris [Fill]	OYR 4/4), medium o	lense, moist, we	eak	5	5	30	30) :
						_												1
									Total Depth =	= 0.5 ft; refusal on wea	thered Chatsworth	Formation Sand	dstone.					
						4			Collected soil	I sample S001 (1 sleev	/e) at 13:50.							
						1-			Backfilled with	th auger cuttings.								
									Buokinica Wit	ar aager oattings.								
						-												
						2-												
						_												
						3-												
						_												
						4-	1											
						_												
						_												
						5-	1											
						-												
						6-]											
						0-												
						-	1											
						7-												
						•												
						-												
						8-												
						_	1											
						9-												
						_]											
						10-												

Boreholo Diam	H in): 3		Т-	tal Deptl	o (ft): 2	Boring ID: HZBS0087 Project: SSFL ISRA Sampling - Outfall 008 Area						_
Borehole Diam. (0.04										_
Northing (ft):	26690			sting (ft)			y Valley South					_
Orill Start Date:				art Time:			By: B. Martasi i		.G.			
Orill Finish Date:				nish Tim		·	mentation: PIC)				
Depth 1st H ₂ O (f		N/A		ate / Time		Drill Rig Type/Method: Hand Auger						
Depth H ₂ O After	Drilling ((ft): N/A	Da	ate / Time	e: N/A	Driller's Name: Ben Cisneros	T					
Comments: Gre	en vege	etation at	surfac	e		Well Comp. Date: N/A	Completion Tir	me:	N/	/Α		
Samplers: Han	d trowe	el (soil pl	aced ir	n stainle	ss steel	eeve) Soil Backfill Date: 02-24-2009	Backfill Time:			3:24		
Sample Interval Retained Sample Type Recovery (%)	Blow Count/6"	PID (ppm) Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	-		Coarse Sand		Fine Sand	il volume
	SM Silty					Silty Sand, dark yellowish brown (10YR 4/6), medium dense, moist, we		ঠ ্			≔ 35	
S		0.1	1— 2— 3— 4— 5— 6— 7— 8—		SIM	Fotal Depth = 2.8 ft; refusal on weathered Chatsworth Formation Sand: Collected soil sample S001 (1 sleeve) at 13:18. Backfilled with auger cuttings.				30	33	

	MW		,			tal D -	th (#1): •	Boring ID: HZBS0088					_
Borehole							th (ft): 2						_
Northing			959.79				t): 1796			-			_
Orill Star			4-2009				e: 13:5			P.G	•		
Orill Fini							ne: 14:0	·	PID				_
Depth 1				N/A			ne: N/A	Drill Rig Type/Method: Hand Auger					_
Depth H						ate / I in	ne: N/A	Driller's Name: Ben Cisneros	- Ti				
Comme						4-!1		Well Comp. Date: N/A Completio			N/A	1	
	S: nai	: Hand trowel (soil placed in stainless steel sleev						sleeves) Soil Backfill Date: 02-24-2009 Backfill Til			14:04 % of		<u></u>
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Sand	Med. Sand	Fine Sand	Cilt/Clox
S			0.0		0- - 1- - 2-		SM	Silty Sand, dark yellowish brown (10YR 4/6), medium dense, moist, weak cementation, plant debris [Fill]	5	5	30	30	
					_	MARKET		Total Depth = 2.3 ft; refusal on weathered Chatsworth Formation Sandstone.					T
					_]		Collected soil samples S001 (1 sleeve) and duplicate D001 (1 sleeve) at 13:59.					
					3-	-		Backfilled with auger cuttings.					
					4-	-							
					_								
	1												
					5-	_							
					-	-							
					6-								
					7-	-							
					-	-							
					8-								
					-	-							
					9-	-							
					_	-							
	1	I	1	1		1					I	I	1

Dorot-	_	VI W		,		т	tal Dar	th (#\\: ^		Boring ID: HZB : Project: SSFL ISRA		I 000 Augs						—
		Diam.						th (ft): 0			Sampling - Outfal			.41.				
Northi				776.20				t): 1795		Job Number: 1891614			py Valley Sou		D O			
		Date:		4-2009				e: 10:4		Logged By: A. Leav			By: B. Marta		P.G			
		n Date:						ne: 10:5		Drilling Contractor: B.		Field Instr	umentation: I	PID				
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
		O After						ne: N/A		Driller's Name: Ben C		NI/A	0	-		1/4		
						surfac		4	ul alaavaa)		Well Comp. Date:		Completion			N/A		_
	iers	: Hand trowel (soil placed in stainless steel sleet							sieeves)		Soil Backfill Date:	02-24-2009	Backfill Time			10:55 % of		
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s			0.0		Ů		SM	Silty Sand, of subangular	dark yellowish brown (1 to subrounded gravel, v	0YR 4/4), medium oveak cementation, p	dense, moist, fir plant debris [Fill]	ne]	5	5	35	35	2
		Total																
										= 0.6 ft; refusal on wea		Formation Sand	istone.					
						1-			Collected Sc	on sample 3001 (2 siee	ves) at 10.51.							
									Backfilled w	ith auger cuttings.								
						_												
						2-	1											
						-	-											
						3-												
						3												
						-												
						4-												
						_												
						5-	1											
						-												
						6-]											
						J												
						-												
						7-												
						_												
						8-	1											
						-												
						9-												
						3												
						-												
				1	1 1	10-			I					1	1	1		-1

	MV		,			tal D - :	th (#1): 4		Boring ID: HZB: Project: SSFL ISRA		000 8						—
Borehole							th (ft): 1			Sampling - Outfal			-41-				_
Northing			678.38				t): 1795		Job Number: 1891614			py Valley Sou					_
Orill Sta			4-2009				: 10:0		Logged By: A. Leav		I	By: B. Mart		P.G.			_
Orill Fini							ne: 10:1 :		Drilling Contractor: B.		Field Instr	umentation:	PID				_
Depth 1:				N/A			ne: N/A		Drill Rig Type/Method:								_
Depth H		r Drillin	g (ft): I	N/A	Da	ate / Tim	ne: N/A		Driller's Name: Ben C								
Comme										Well Comp. Date:		Completion			N/A		_
	lers: Hand trowel (soil placed in stainless steel slee									Soil Backfill Date:	02-24-2009	Backfill Tim			0:15		_
Sample Interval Retained	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
S S			0.0		1-		SM	subrounded	rellowish brown (10YR gravel [Fill] = 1.2 ft; refusal on wea				10	10	30	30	
					-	-		Collected so	il samples S001 and sp	olit S00SP (total 4 s	eeves) at 10:0	9.					
											,						
					2-			Backfilled Wi	ith auger cuttings.								
					_												
					3-												
					_												
					4-	-											
					_												
					5												
					_												
					6-												
					_]											
					_												
					7-												
					_												
					_												
					8-												
					_												
					9-												
																	1
					_												1
	1	1	1	1 1		1							1	1	1		-1

	MW				Т-	tal Dan	th (ft): 1		Boring ID: HZB Project: SSFL ISRA		I NNS Area						_
Borehole							th (ft): 0			Sampling - Outfal			.41.				_
Northing (728.05				t): 1795		Job Number: 1891614			py Valley Sou		D O			_
Orill Start			4-2009				e: 11:0		Logged By: A. Leav			By: B. Marta		P.G			
Orill Finis							ne: 11:1		Drilling Contractor: B.		Field Instr	umentation: I	עוץ				_
Depth 1st Depth H ₂ 0		-		N/A			ne: N/A		Drill Rig Type/Method: Driller's Name: Ben (_
						ate / Tirr	ne: N/A	<u> L</u>	onlier's Name: Ben C		N/A	Completion	Time		N/A		_
Comment						o otoini	ann atan	el sleeve)		Well Comp. Date:		Completion Backfill Time			N/A 1:15		_
	. паг	iu trov	vei (Sc)II PI	aceu ii	Stairii		sieeve)		Soil Backfill Date:	02-24-2009	Dackiiii Tiffi			% of		
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s			0.0		Ů		SM	Silty Sand, da	ark yellowish brown (1 o subrounded gravel, v	0YR 4/6), medium oveak cementation in	dense, moist, fir plant debris [Fill	ne 1	10	5	35	35	
					_			Ŭ.				-					
								Total Depth =	= 0.5 ft; refusal on wea	thered Chatsworth	Formation Sand	dstone.					
					,			Collected soil	l sample S001 (1 slee	ve) at 11:13.							
					1-]		Backfilled wit	th auger cuttings.								
								Dackinieu Wil	ar auger outlings.								
					-	1											
					2-	-											
					_												
					3-	1											
					-	-											
					4-]											
					-												
					_	1											
					5												
					_]											
					_												
					6-	1											
					-												
					7-												
					•												
					-	1											
					8-	- 1											
					_												
					_												
					9—	1											
					-												
	- 1		1	1 1	10-								1	1	1		-1

(f	(MW	/H							Boring ID: HZB	 S0092							
Borel	_		(in.): 3	<u> </u>		Т.	ntal De	oth (ft): 0	. 8	T T	Sampling - Outfal	I NNS Area						
North				930.40				ft): 1796		Job Number: 189161			py Valley Sou	ıth				
		Date:		5-200				e: 08:0		Logged By: A. Leav			By: B. Mart a		ΡG			
			: 02-2					me: 08:1 :		Drilling Contractor: B.		I	umentation:					
		H ₂ O (N/A			me: N/A		Drill Rig Type/Method:		1 1010 11101						
			Drillin					me: N/A		Driller's Name: Ben	_							
			getatio								Well Comp. Date:	N/A	Completion	Time	: N	I/A		
							n stain	less stee	l sleeve)		Backfill Tim	e:	0	8:17				
val								_					% of	So	il			
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0				SM	Silty Sand, minor plant	yellowish brown (10YR t debris [Alluvium]	5/6), medium dense	e, moist, weak o	cementation,	5	5	30	30	30
							24249		Total Depth	h = 0.8 ft; refusal on wea	athered Chatsworth	Formation San	dstone.					
						1-	1					· oa.a						
									Collected s	soil sample S001 (1 slee	ve) at 08:13.							
							1		Backfilled v	with auger cuttings.								
						2-	1											
							-											
						3-												
							1											
						4-	1											
							-											
						5-	-											
						6-	1											
						7-	-											
							-											
						8-												
							1											
						9-	1											
							-											
						10												

LOG OF BORING OUTFALL008.GPJ BOEING.GDT 3/19/09

Boroh	_	VI W		:			tal Don	th (ft): 2		Boring ID: HZB S	Sampling - Outfa	II NNS Aros						_
													nny Vallay Sar	ıth				_
North				923.29 4 2000				t): 1796		Job Number: 1891614			ppy Valley Sou		D C			_
		Date:						e: 13:2		Logged By: A. Leavi			By: B. Marta		r.G			_
		n Date:						ne: 13:3		Drilling Contractor: B.I		Field Instr	umentation: I	עוץ				_
		H ₂ O (f	•		N/A			ne: N/A		Drill Rig Type/Method:								_
		O After						ne: N/A		Driller's Name: Ben C								
							el at sur				Well Comp. Date		Completion	Time		N/A		_
	plers: Hand trowel (soil placed in stainless steel slee							ess stee	l sleeve)		Soil Backfill Date	: 02-24-2009	Backfill Time			3:36		
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		C	Description			Gravel	Sand	Med. Sand	Fine Sand	
	S			0.1		1-		SM	Silty Sand, c cementation	dark yellowish brown (10 , plant debris [Fill]	OYR 4/6), medium	dense, moist, w	eak	10		30		3
									Total Depth	= 2.0 ft; refusal on weat	thered Chatsworth	Formation Sand	dstone.					
Collected soil sample S001 (1 sleeve) at 13:33.																		
					Collected soil sample S001 (1 sleeve) at 13:33. Backfilled with auger cuttings.													
							Backfilled with auger cuttings.											
						•												
						3-												
						_												
						4												
						_												
						_												
						5-	1											
																		l
						-												
																		l
						c												
						6-												
																		l
						-												
						7												l
						,-												l
																		l
						-	-											l
																		l
						8-												
						U												
						-												
						9-												
						9												
						-	1											
																		l
	- 1			ı	1 1		1		ĺ.					1	1	1		

Carobi	_	MW Diam				-	tal Dar	th (#\. ^		Boring ID: HZB : Project: SSFL ISRA		1 000 4=05						—
		Diam.						th (ft): 0			Sampling - Outfal			-41-				_
Northi				30.73				t): 1796		Job Number: 1891614			py Valley Sou					_
		Date:		4-2009				: 12:5		Logged By: A. Leav			By: B. Marta		P.G			_
		n Date:						ne: 13:0		Drilling Contractor: B.		Field Instr	umentation:	PID				_
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
) After	Drilling	g (π): r	N/A	Da	ate / I in	ne: N/A		Driller's Name: Ben C		N/A	0 1 11	-				_
Comm		nts: Hand trowel (soil placed in stainless steel slee									Well Comp. Date:		Completion			N/A		_
	iers:	: Han	ia trov	vei (sc	on pr	aced ir	n staini	ess stee	el sieeves)		Soil Backfill Date:	02-24-2009	Backfill Tim			13:02 % of		.ii
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S	0.0 SM Silty cem								dark yellowish brown (1 i, plant debris [Alluvium = 0.9 ft; refusal on wea]			5	5	30	30	
		Col - Bac							Callantad an	il commis COO1 (O class	(a) at 12:51							
									Collected so	oil sample S001 (2 slee	/es) at 12:54.							
									Backfilled wi	ith auger cuttings.								
						_												
						2-	1											
						-	-											
						•												
						3-	1											
						-	-											
						4												
						7												
						-	1											
						5												
						•												
						-	1											
						6-												
						_]											
						7-	1											
]											
						_												
						8-	†											
						_												
						9-	†											
						-												
	- 1			i	(I		1		i .					1	1	1	1	- 1

Roreh	_	MW Diam		<u> </u>			tal Dan	th (ft): 1		Boring ID: HZB : Project: SSFL ISRA		I NNR Aros						
		Diam.									Sampling - Outfal		m. Vallay Cay	.41.				_
Northi		ιι). Date:		911.24 4-2009				t): 1796 e: 13:3		Job Number: 1891614 Logged By: A. Leav			py Valley Sou		D C			_
		Date:						ne: 13:3				I	By: B. Mart umentation:		P.G			
					N/A					Drilling Contractor: B.		Fleid instr	umentation:	PID				_
		H₂O (f D After						ne: N/A		Drill Rig Type/Method: Driller's Name: Ben 0								_
		s: Veg					ate / Tirr	ne: N/A		Driller's Name: Ben C		NI/A	Completion	Time		N/A		
							o otoinl	ot	l alasya)		Well Comp. Date:		Completion			N/A 3:44		
	iers	ers: Hand trowel (soil placed in stainless steel slee									Soil Backfill Date:	02-24-2009	Backfill Tim			% of		,ii
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S			0.0		1-		SM	Silty Sand, c cementation	dark yellowish brown (1 n, plant debris [Fill]	OYR 4/4), medium o	dense, moist, w	eak	5		30	35	
						-	15384646		Total Depth	= 1.5 ft; refusal on wea	thered Chatsworth	Formation Sand	dstone.					+
						2-				oil sample S001 at 13:4	J.							
									Backfilled w	ith auger cuttings.								
						_												
						3-	1											
						_												
						4-	1											
						_												
						5	1											
						_												
						6-	1											
						_												
						_												
						7-	1											
						-												
						0												
						8-]											
						-												
						9-]											
						5												
						-												
				1	1	10-									1	1	1	- 1

	-1 -	D:-	/: \ -				4-1-0	u- /60 -	_	Boring ID: HZB		000 4						_
			(in.): 3					th (ft): 1			A Sampling - Outfall							_
orth				51.39				t): 179 6		Job Number: 189161			py Valley Sou					
			02-2					e: 11:4		Logged By: A. Leav		Reviewed	By: B. Marta	ısin,	P.G	i		
			: 02-2					ne: 11:4	7	Drilling Contractor: B		Field Instr	umentation: I	PID				
		H ₂ O (1			N/A			ne: N/A		Drill Rig Type/Method:								
			Drillin					ne: N/A		Driller's Name: Ben			T					
omn	nent	s: Veç	getatio	n and	brus	h at s	urface				Well Comp. Date:	N/A	Completion	Time	e: 1	N/A		
	lers:	: Haı	nd trov	vel (so	oil pla	aced in	stainle	ess stee	l sleeve)		Soil Backfill Date:	02-25-2009	Backfill Time			1:49		
	ype	,		(1	lev	et)	Log	il ation						-	_	% of		
Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	0:14/0
	S			0.0		1-		SM	Silty Sand, cementatio	dark yellowish brown (′ on, plant debris [Fill]	IOYR 4/6), medium d	ense, moist, we	eak		5	30	35	3
						_	156,154,15		Total Depth	h = 1.3 ft; refusal on wea	athered Chatsworth I	Formation Sand	dstone.					t
									Collected s	soil sample S001 (1 slee	eve) at 11:45.							
						2-				with auger cuttings.								
						-												
	3-																	
	3-																	
	3-																	
						4-												
	4-																	
	5—																	
						-												
						6-												
						7-												
						=												
						8-												
						-												
						9-												
						-												

		WN				 -	tal D =	th (#\: ^		Boring ID: HZB		000 4						—
		Diam.						th (ft): 0			Sampling - Outfal			.41.				_
Northi)42.48 5.000				t): 1796		Job Number: 1891614			py Valley Sou		D O			_
		Date:		5-2009				: 12:0		Logged By: A. Leavi		I	By: B. Marta		P.G	•		_
		Date:						ne: 12:1		Drilling Contractor: B.I		Field Instr	umentation: I	עוץ				_
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
		After					ite / Tim	ne: N/A		Driller's Name: Ben C		NI/A	0	T :		1/4		_
		ents: Road gravel on surface ers: Hand trowel (soil placed in stainless steel slee									Well Comp. Date:		Completion			N/A		_
	ers:								sieeve)		Soil Backfill Date:	02-25-2009	Backfill Time			12:13 % of		
Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s	S 0.0 SM Silty ceme							Silty Sand, do	lark yellowish brown (10 , plant debris [Fill]	0YR 4/4), medium o	lense, moist, we	eak	10	5	30	30	
×	Tota								Total Depth =	= 0.6 ft; refusal on wea	thered Chatsworth	Formation Sand	dstone.					Ŧ
						1-			Collected soi	il sample S001 at 12:1	1.							
									Backfilled wit	th auger cuttings.								
						-												
						2-												
						3-												
						4-												
						_												
						_												
						5-												
						_												
						6-												
						7-												
						-												
						8-												
						-												
						9-												
						J												
						-												
				i	1 L									1	1	1	1	- 1

lorthir Irill St Irill Fi		Diam.	(111. j. Z	, •		110	tal Dep											
rill St Irill Fi										Project: SSFL ISRA Job Number: 1891614	Sampling - Outfall		py Valley Sou	ıth				
rill Fi															D C			_
											isin, P.G.		By: B. Marta	•	P.G.			
								ne: 08:1 0	U	Drilling Contractor: B.I			rumentation: I		4			_
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:		nai location);	Hand Auger (adja	cent	bori	ng)	_
		After						ne: N/A		Driller's Name: Ben C			1					
										in soil matrix)	Well Comp. Date:		Completion			I/A		
ample	ers:	Har	d trov	vel (sc	oil pla	aced ir	stainle	ess stee	l sleeve); grab	from auger head	Soil Backfill Date:	03-20-2009	Backfill Time			8:20		_
Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	0:14(0)
SM Silty Sand with Gravel, light brown (7.5YR 6/4), loose, dry 1 SM Silty Sand, brown (7.5YR 4/4), loose, moist Total Depth = 1.5 ft; refusal on weathered Chatsworth Formation Sandstone.										15	15	10	60					
	5					-	Total Depth = 1.5 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 by hand trowel at original location at 08:05 and soil sample S002 from auger head in boring 0.5 ft from original location at 14:00.											_
						2		Collected soil sample S001 by hand trowel at original location at 08:05 and soil										
										sample S002 from auger head in boring 0.5 ft from original location at 14:00.								
						3				Backfilled with auger cuttings.								
						_												
						4-												
						5-												
						-												
						6-												
						7-												
						8-												
						9-												
						3												

(1))	ΜW	/H							Boring ID: HZB	S0099							
Boreh	nole	Diam	(in.): 2	·		Te	ntal Der	oth (ft): 0).6		A Sampling - Outfal	II 008 Area						
Northi				966.73				ft): 1795		Job Number: 189161			opy Valley Sou	ıth				
															п.С			
		Date:		0-200				e: 08:2		Logged By: B. Mart			By: B. Mart		P.G.			
			: 03-2					me: 08:3		Drilling Contractor: B		Field Inst	rumentation:	N/A				
		H ₂ O (N/A			ne: N/A		Drill Rig Type/Method:								_
			r Drillin	g (π):	N/A	Da	ate / Tir	ne: N/A		Driller's Name: Ben			Ta					
Comn								_			Well Comp. Date:		Completion			I/A		
	lers	<u>: На</u>	nd trov	vel (so	oil pl	aced i	n stain	less stee	el sleeve)		Soil Backfill Date:	03-20-2009	Backfill Tim			8:35		
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand 8	
	S	1— SM Sii						SM	Total Depth	th = 0.6 ft; refusal on wea soil sample S001 at 08:3	athered Chatsworth		dstone.			10	55	35
			Total 1— Colle Back					васкинест	with native soil.									
						4-	_											
						5-	_											
		4																
						7-	_											
						8-	-											
						9-	_											
						-												

LOG OF BORING OUTFALL008.GPJ BOEING.GDT 3/24/09

	_	VI W		,			4-1 5	4h /ft\ -		Boring ID: HZB		000 4						
		Diam.						th (ft): 0			Sampling - Outfall							_
Northi				524.97				t): 1795		Job Number: 1891614			py Valley Sou					
		Date:		0-2009				e: 10:3		Logged By: B. Marta	•		By: B. Marta		P.G			
		n Date:						ne: 10:4		Drilling Contractor: B.I		Field Instr	umentation: I	N/A				
		H₂O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
Depth	H ₂ C	O After	Drillin	g (ft): I	N/A	Da	te / Tin	ne: N/A		Driller's Name: Ben C	isneros							
		s: Gra									Well Comp. Date:	N/A	Completion	Time		N/A		
	lers:	: Har	nd trov	vel (sc	oil pla	aced ir	stainl	ess stee	el sleeve)		Soil Backfill Date:	03-20-2009	Backfill Time			0:45		
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil	Silty Sand h	prown (7.5YR 4/4), loos	Description	lluvium]		Gravel	Coarse Sand	Med. Sand	60 Fine Sand	
	s							Sivi	Silty Sand, b	7.511(4/4), 1005	e, moist, rootiets [A	iiuviuitij					00	-
\otimes						-			T	0.5%		- " 0	1.1					+
									Total Depth	= 0.5 ft; refusal on wear	tnered Chatsworth	-ormation Sand	astone.					
						,			Collected so	il sample S001 at 10:40) .							
						1-			Rackfilled wi	th native soil.								
									Dackinieu Wi	at Hauve Juli.								
						-												
						2-												
						_												
						3-												
						4												
						_												
						5-												
						_												
						6-												
						-												
						_												
						7-												
						-												
						8-												
						0												
						-												
						9-												
						9-												
						-												
	- 1			1		10-									1			- [

reno					1 -	4-1-	th /ft/ -		Danie at. 0051 105 1	Committee C 15 "	000 4						
		n. (in.):					th (ft): 0			Sampling - Outfall							_
	g (ft):		6144.1				t): 1796		Job Number: 1891614			py Valley Sou					_
	art Dat		-20-20				e: 09:5			asin, P.G.		By: B. Marta		P.G.			_
		te: 03	-20-200				ne: 10:0		Drilling Contractor: B.		Field Instr	umentation: I	N/A				_
_	1st H ₂ 0			N/A			ne: N/A		Drill Rig Type/Method:								—
		ter Drill					ne: N/A		Driller's Name: Ben C			1					_
							at surfa			Well Comp. Date:		Completion	Time		I/A		_
mple	ers: I	land tr	owel (s	oil pl	aced ir	stainle	ess stee	l sleeve)		Soil Backfill Date:	03-20-2009	Backfill Time			0:02		_
Retained	Sample Type Recovery	Blow	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Well Conded		Description	-4 41-4- 5011		Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s						SW	vveii Graded	Sand, light brown (7.5	11R 6/4), 100SE, 11101	si, rooliels [Allu	iviumj	10	30	30	30	
					_												
								Total Depth =	= 0.5 ft; refusal on wea	thered Chatsworth	Formation Sand	dstone.					
					_			Collected soi	il sample S001 at 10:00	0.							
					1-				•								
								Backfilled wit	th native soil.								
					-												
					2-												
					_												
					-												
					3-												
					4												
					_												
					5												
					_												
					_												
					6-												
					_												
					7-												
					,												
					-												
					8-												
					-												
					_												
					9-												
	- [
	J																- 1
					_												
					8- - 9-												

Porobolo Diama	H in): 2		Total	Donth (#\): 1	Boring ID: HZBS0102					
Borehole Diam. (Depth (ft): (
Northing (ft):	265861.2			ng (ft): 179		_				
Orill Start Date:				Time: 09: 4	1 00 7		, P.G	i		
Orill Finish Date:	03-20-20	009		Time: 09:4	Drilling Contractor: B.L. Hall Field Instrumentate	on: N/A				
Depth 1st H ₂ O (ft		N/A	Date /	Time: N/A	Drill Rig Type/Method: Hand Trowel					
Depth H ₂ O After	Drilling (ft)): N/A	Date /	Time: N/A	Driller's Name: Ben Cisneros					
Comments: In d	rainage, s	and and	d vegeta	tion at surfa	e Well Comp. Date: N/A Comp.	letion Tim	e:	N/A		
Samplers: Han	d trowel (s	soil plac	ced in st	ainless stee	Soil Backfill Date: 03-20-2009 Backf	II Time:		09:50)	
ह्य				_			Est.	% o	f So	il
Sample Interval Retained Sample Type Recovery (%)	Blow Count/6" PID (ppm)	Water Level	•	USCS Soil Classification	Description	Gravel			Fine Sand	
⊗ s				SM	Silty Sand, light brown (7.5YR 6/4), loose, dry, rootlets [Alluvium]	10	25	20	30	1
			1— 2— 3— 4— 5— 6— 7— 8—		Total Depth = 0.3 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 09:45. Backfilled with native soil.					

	<u>(</u>	ΜW	/H							Boring ID: HZ	BS0103							
Barat			(in.): 2	,		T-	otal De-	oth (ft): 0	. 5		RA Sampling - Outfal	I NNS Area						
				343.93	,								nny Vallay Cay	-th				
North		Date:		0-200				ft): 1795 e: 09:1		Job Number: 1891 Logged By: B. M			opy Valley Sou		D C			
			: 03-2								artasin, P.G.		By: B. Marta rumentation: I		P.G.			
					9 N/A			me: 09:2	.0	Drilling Contractor:		Fleid Iffst	umentation. I	WA.				
		H ₂ O (me: N/A		Drill Rig Type/Meth								
			Drillin					me: N/A	a naisan aak	Driller's Name: Be		NI/A	Completion	Timo		l/A		
								less stee	g poison oak	a surface	Well Comp. Date: Soil Backfill Date:		Completion Backfill Time			9:25		
	лего	. па	liu trov	vei (Si	UII P	iaceu ii	Stairi		i Sieeve)		Soil Backilli Date.	03-20-2009	Dackilli Tilli			% of		il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
								SM	Silty Sand,	light brown (7.5YR 6	(4), loose, moist, rootle	ets [Alluvium]				10	50	40
\bowtie	0																	
V V V						-			Total Depth	h = 0.5 ft; refusal on v	veathered Chatsworth	Formation San	dstone.					
									Collected s	soil sample S001 at 0	9:20							
	S S S S S S S S S S S S S S S S S S S																	
									Backfilled v	with native soil.								
						-	-											
						2-	1											
						_												
						-	1											
						3-	1											
						4-	1											
						-	1											
						5-	-											
1						_												
						6-	1											
						-	1											
						7-	1											
							1											
						8-	1											
							-											
						_												
1						9-	1											
1																		
						-	1											
						10												

LOG OF BORING OUTFALL008.GPJ BOEING.GDT 3/24/09

Borehole	MW		,		Т-	tal Don	th (ft): 0		Boring ID: HZB : Project: SSFL ISRA	Sampling - Outfal	I NNS Aros						_
												Vallar Car	.41.				_
Northing			375.16				t): 1795		Job Number: 1891614			py Valley Sou		n c			_
Orill Start			0-2009				e: 10:5			asin, P.G.		By: B. Marta		P.G			_
Orill Finis							ne: 11:0		Drilling Contractor: B.		Field Instr	umentation: I	N/A				_
Depth 1s		_		N/A			ne: N/A		Drill Rig Type/Method:								_
Depth H ₂							ne: N/A		Driller's Name: Ben C								_
Commen										Well Comp. Date:		Completion			N/A		
	s: Har	nd trov	vel (so	oil pla	aced ir	stainl	ess stee	l sleeve)		Soil Backfill Date:	03-20-2009	Backfill Time			1:05		_
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	0111		Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s					- 1- -	20000000000000000000000000000000000000	SM	Total Depth	= 0.7 ft; refusal on wea bil sample S001 at 11:00 with native soil.	thered Chatsworth		dstone.			10	50	
					2 3												
					4-												
					5-												
					6-												
					7-												
					8-												
					9-												
					10-												

Dorah :		W N		,		-	tal Da-	4b /#\. ^	Boring ID: HZBS0105 Project: SSFL ISRA Sampling - Outfall 008 Area					—
Boreho								th (ft): 0	·	41-				
Northir Drill St				989.21 9-2009				t): 1795 e: 08:3			D C			_
											P.G			
				9-200	9 N/A			ne: 08:4		N/A				_
		H ₂ O (f		g (ft): I				ne: N/A	Drill Rig Type/Method: Hand Auger Driller's Name: Ben Cisneros					_
									hunks at surface Well Comp. Date: N/A Completic	n Time	٠ ١	N/A		_
								ess stee				08:45		
		- I I G	ia tioi	101 (50		uccu ii	Juni		Sievery Son Backini Bate. 97-99-2000 Backini Fi			% o		il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s					-		SM	Silty Sand, light yellowish brown (10YR 6/4), loose, dry, rootlets [Artificial Fill]	10	15	25	35	i
									Total Depth = 0.8 ft; refusal on weathered Chatsworth Formation Sandstone.	-				+
						1-	†							
									Collected soil sample S001 at 08:40.					
						-			Backfilled with native soil.					
						2-	-							
						_	-							
						3-								
						3								
						_	1							
						4	1							
						-	-							
						5								
						_								
						_								
						6-	1							
						-	†							
						7-								
						-								
						8]							
						3								
						-	1							
						9-	†							
						-								
				1	1 1	10-				- 1		1	1	- 1

	MW				- I.				Boring ID: HZB							
orehole							th (ft): 4			Sampling - Outfall						
lorthing (54.48				t): 179		Job Number: 1891614			py Valley Sou				
rill Start	Date:	04-0	9-2009	9			e: 08:1			sin, P.G.	Reviewed	By: B. Marta	ısin,	P.G.		
rill Finisl	n Date:	04-0	9-2009	9			ne: 08:3		Drilling Contractor: B.I	L. Hall	Field Instr	umentation: I	V/A			
epth 1st	H ₂ O (f	t):		N/A	Da	te / Tin	ne: N/A		Drill Rig Type/Method:	Hand Auger						
epth H ₂ 0	O After	Drillin	g (ft): I	N/A	Da	te / Tin	ne: N/A		Driller's Name: Ben C			1				
omment				_						Well Comp. Date:	N/A	Completion	Time	: N	I/A	
	: Han	d trov	vel (so	oil pla	aced ir	stainl	ess stee	el sleeve); grab	from auger head	Soil Backfill Date:	04-09-2009	Backfill Time			8:35	
Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand
S		2-			orownish yellow (10YR 6		vium]					60				
					4-			Total Depth	= 4.2 ft; refusal on wea	thered Chatsworth F	Formation Sand	dstone				
					_							2010110.				
					_			Collected so	oil samples S001 at 08:2	20 and S002 at 08:3	0.					
					-			Backfilled w	ith native soil.							
					6			Baokilloa W	iai ridavo com.							
					·											
					-											
					_											
					_											
					8-											
					-											
					_											
					10-											
					-											
					_											
					_											
					- مد											
					12-											
					-											
					_											
					_											
					11											
					14-											
					-											
					_											
					_											
					16-											
					16-											
					-											
					_											
					-											
					18-											
					10											
					-											
					_											
					_											

) (ΜW	/Н							Boring ID: HZB \$	S0107							
Boroh	_		(in.): 3	<u> </u>		Та	otal Do-	oth (ft): 1			Sampling - Outfal	I NNS Aros						
North				922.59				ft): 1795		Job Number: 1891614			py Valley Sοι	th				
		Date:		9-200				e: 08:0			asin, P.G.		By: B. Mart a		D C			
			: 04-0					ne: 08:1		Drilling Contractor: B.I			umentation:		r.G.			
		H ₂ O (N/A			me: N/A		Drill Rig Type/Method:		i leiu ilisti	umentation. I	WA.				
			Drillin					me: N/A		Driller's Name: Ben C								
			y sand				ate / Til	ne. N/A		Dillers Name. Ben C	Well Comp. Date:	N/A	Completion	Timo	. N	I/A		
							n etain	less stee	l cloovo)		Soil Backfill Date:		Backfill Time			8:15		-
	JICIS	. IIa	iu ii o	WEI (S		aceu II	Julia		i Sieeve)		John Dackilli Date.	04-03-2009	Dackilli Tilli					il.
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		ι	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	S		1 SM Silty Total										10	15	20	30	25	
			Total Depth = 1.0 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 08:10, as well as duplicate D001. Backfilled with native soil.															
		Total Depth = 1.0 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 08:10, as well as duplicate D001. Backfilled with native soil.																
									Backfilled Wi	ith native soil.								
						2-	-											
						_												
						3-	1											
						-	-											
						1-												
						4-												
						-	1											
						5-	-											
						_	1											
						6-	1											
	Total Depth = 1.0 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 08:10, as well as duplicate D001. Backfilled with native soil.																	
	Total Depth = 1.0 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 08:10, as well as duplicate D001. Backfilled with native soil. 2 - 5- 6- 7 7-																	
	Total Depth = 1.0 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 08:10, as well as duplicate D001. Backfilled with native soil. 4— 5— 6—																	
						7-]											
						-	1											
						8-	-											
						-	1											
						9-	1											
						-	1											
																		1

LOG OF BORING OUTFALL008.GPJ BOEING.GDT 4/30/09

(1	ΜW	/Н							Boring ID: HZBS01	08							
Borel	rehole Diam. (in.): 2 Total Depth (ft): 0.5 Project: SSFL ISRA Sampling - Outfall 008 Area rthing (ft): 266895.35 Easting (ft): 1795569.36 Job Number: 1891614 Site: Happy Valley South Il Start Date: 04-09-2009 Start Time: 14:40 Logged By: B. Martasin, P.G. Reviewed By: B. Martasin, P.G. Il Finish Date: 04-09-2009 Finish Time: 14:45 Drilling Contractor: MWH Field Instrumentation: N/A pth 1st H ₂ O (ft): N/A Date / Time: N/A Drill Rig Type/Method: Hand Trowel pth H ₂ O After Drilling (ft): N/A Date / Time: N/A Driller's Name: B. Martasin, P.G. Well Comp. Date: N/A Soil Backfill Date: 04-09-2009 Backfill Time: 14:45 Est. % of Soil																	
											piirig - Outiui		nny Valley Sou	th				
											P.C				D C			
											r.G.				r.G.			
									5		d T	Field Insti	umentation: I	N/A				
			r Drillin	g (π):	N/A	Da	ate / Tir	ne: N/A					1					
								_										
	olers	: Ha	nd trov	vel (s	oil p	laced i	n stain	less stee	l sleeve)	Soil	Backfill Date:	04-09-2009	Backfill Time					
Sample Interval Retained	Samplers: Hand trowel (soil placed in stainless steel sleeve) Agenty Count						USCS Soil Classification	Desci	ription			Gravel			Fine Sand			
	Samble Type Connt/e Mater Level Mater Level SM Silty Sand, light brown (7.5YR 6/3), loose, dry, rootlets [Alluvium] 5 15 20 Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 14:45.			40														
	٥	S SM Silty Sand, ligh Total Depth = 0 Collected soil s Backfilled with						T. (15) (1										
		SM Silty Sand, light Total Depth = 0. Collected soil sa Backfilled with n									etusal.							
		1-								·								
		SM Silty Sand, light brown Total Depth = 0.5 ft; te Collected soil sample S Backfilled with native s					vitn native soil.											
			Sest. Dues parcol Description Descri															
	SM Silty Sand, light brown (7.5YR 6/3), loose, dry, rootlets [Alluvius Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 14:45. Backfilled with native soil.																	
						-												
						3-												
						4-	-											
						5-	-											
						-												
						6-												
						_												
						_												
		4																
5— 6— -																		
						8-												
							-											
		6— 7—																
		3- 4- 5- 6- 7- 8-																

LOG OF BORING OUTFALL008.GPJ BOEING.GDT 4/30/09

	MW							Boring ID: HZBS0109					_
Borehole							th (ft): 0						_
Northing			390.46				t): 1795						_
Orill Star							e: 08:0			P.G	. #83	56	_
Orill Finis							ne: 08:0		N/A				_
Depth 1s Depth H ₂				N/A			ne: N/A	Drill Rig Type/Method: Slide Hammer Driller's Name: B. Cisneros					_
						ile / IIII	ie. IN/A	Well Comp. Date: N/A Completion	Time	ı ا	N/A		_
Samplers						ss stee	l sleeve	Soil Backfill Date: 06-01-2009 Backfill Tir			08:10)	_
											% o		il
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Sand	Med. Sand	Fine Sand	
s					0-		SM	Silty Sand, pale brown (10YR 6/3), medium dense, dry, rootlets [Alluvium]			10	50	
					+	MANA		Total Depth = 0.5 ft; terminated prior to refusal.					+
		1—			Collected soil sample S001 at 08:09.								
								Backfilled with native soil.					
					+								
					2-								
					4								
					3-								
					4								
					4-								
					-								
					5-								
					3_								
					7								
					6-								
					†								
					_								
					7-								
					+								
					8-								
					+								
					9-								
					+								
	1	l	1	1	10					1	1		

W) IV	1W	Н							Boring ID: HZB	S0110							_
			in.): 2					th (ft): 0			Sampling - Outfall							_
Northin				49.97				t): 1795		Job Number: 1891614			ppy Valley Sou		D 2	400		_
			06-0°				art Time	e: 08:0		Logged By: B. Marta Drilling Contractor: B.	nsin, P.G. #8356		By: B. Marta umentation: I		P.G.	#83	06	_
Depth					N/A			ne: N/A	<u></u>	Drill Rig Type/Method:		T ICIU IIISU	umentation. I	<u>v</u> A				_
			Drilling					ne: N/A		Driller's Name: B. Cis								
			etatio								Well Comp. Date:	N/A	Completion	Time	e: N	I/A		
Sample	ers:	Slid	e ham	mer v	vith s	stainles	ss stee	l sleeve	I		Soil Backfill Date:	06-01-2009	Backfill Time			8:05		
Sample Interval Retained	Sample Type	(%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		ι	Description			Gravel	Coarse Sand st	Med. Sand 일	Fine Sand	
	s		1— SM Si		Silty Sand,	pale brown (10YR 6/3),	loose, dry, rootlets [A	Alluvium]		5	10		40	_				
			1— SM S		Total Denth	n = 0.5 ft; terminated price	or to refusal							╀				
			1— SM S															
			1-							oil sample S001 at 08:00	J.							
			1— SM			Backfilled w	vith native soil.											
						-												
						_												
						2-												
						-												
						_												
						3-												
						4-												
						-												
						5												
						-												
						6-												
						-												
						7-												
						_												
						8-												
						-												
						9-												
						-												
																		1

Porc'	_	VI W				т	tal Davi	th (#\. ^) E	Boring ID: HZB		000 6===						_
			(in.): 2					th (ft): 0			Sampling - Outfall			41-				_
North				791.95				t): 1795		Job Number: 1891614			py Valley Sou		D O	400		_
			06-0					e: 08:2			sin, P.G. #8356		By: B. Marta		۲.G.	#83	56	_
			: 06-0					ne: 08:2	9	Drilling Contractor: B.I		Field Instr	umentation: I	N/A				
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
			Drilling				ite / Tim	ne: N/A		Driller's Name: B. Cis								_
			getatio								Well Comp. Date:		Completion					_
	lers	: Har	nd trov	vel (so	oil pla	aced in	stainle	ess stee	el sleeve)		Soil Backfill Date:	06-01-2009	Backfill Time			8:30		
Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			escription			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s							SM	Silty Sand,	pale brown (10YR 6/3),	medium dense, dry	, rootlets [Alluvi	um]		5	25	40	3
\otimes						_	ACHATA		Total Depth	n = 0.5 ft; terminated prio	r to refusal.							+
						4			Collected s	oil sample S001 at 08:28	3.							
						1-				vith native soil.								
									Daominica V	1144170 0011.								
						-												
						2-												
						-												
						3-												
						3-												
						-												
						4-												
						_												
						_												
						5												
						-												
						6-												
						7-												
						-												
						8-												
						3												
						-												
						9-												
						_												
	- 1	- 1		Ì	1 1		1		I					1	1	1		-1

W	_	ΝW							Boring ID: HZBS0112					_
		Diam.						th (ft): 0						_
Northi				07.97				t): 1795						_
		Date:						e: 09:4			P.G	. #83	56	
		n Date: H₂O (f			9 N/A			ne: 09:4 ne: N/A	Drill Rig Type/Method: Slide Hammer	N/A				_
		∩₂O (i) After	•					ne: N/A	Driller's Name: B. Cisneros					_
		s: Veg					10 / 1111	ic. IWA	Well Comp. Date: N/A Completion	Time	e: I	N/A		_
Samp							ss stee	l sleeve	Soil Backfill Date: 06-01-2009 Backfill Tir			9:46	;	
al 											Est.	% o	f So	il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s					U		SM	Silty Sand, pale brown (10YR 6/3), loose, dry, rootlets [Alluvium]	5	10	10	35	
						-			Total Depth = 0.5 ft; terminated prior to refusal.					+
									Collected soil sample S001 at 09:44.					
						1-			Backfilled with native soil.					
									Dackinieu with Hative Suil.					
						1								
						2-								
						-								
						3-								
						-								
						4-								
						4								
						5-								
						_								
						6-								
						-								
						7-								
						.								
						8-								
						3-7								
						1								
						9-								
						-								
					1 1							1		

		IW					4-15	4h /ft\ -		Boring ID: HZBS		000 4						—
			in.): 2					th (ft): 0			Sampling - Outfall							_
Northir				65.17				t): 179 5		Job Number: 1891614			ppy Valley Sou					
				1-2009				e: 09:5		Logged By: B. Marta			By: B. Marta		P.G.	#83	56	
				1-2009	9			ne: 09:5		Drilling Contractor: B.I		Field Insti	rumentation: N	N/A				_
Depth			•		N/A			ne: N/A		Drill Rig Type/Method:								_
				g (ft): I			ate / Tin	ne: N/A		Driller's Name: B. Cis								
Comm	ents:	Veg	etatio	n at sı	urfac	ce					Well Comp. Date:	N/A	Completion	Time		I/A		
	ers:	Han	d trov	vel (sc	oil pl	aced in	n stainl	ess stee	el sleeve)		Soil Backfill Date:	06-01-2009	Backfill Time			9:59		
Sample Interval Retained	Sample Type	(%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s					ŭ	•	SM	Silty Sand, p	pale brown (10YR 6/3),	loose, dry, rootlets [Alluvium]		10	10	10	40	
	3						A											
									Total Depth :	= 0.5 ft; refusal on wea	thered Chatsworth F	ormation San	dstone.					Ī
									Collected so	il sample S001 at 09:57	7							
						1-	1											
									Backfilled wi	th native soil.								
						-	-											
						2-												
						_												
						_												
						3-	1											
						_												
						4												
						-												
						5												
						•												
						-	1											
						6-	1											
						_												
						-												
						7-												
						-												
						8-												
						-												
						-	1											
						9-	1											
						_												
																		- 1

	MW					4-1-0	41- (ft) C		Boring ID: HZB		000 4						_
orehole							th (ft): 0.			Sampling - Outfall			41-				_
lorthing			320.28				t): 1795		Job Number: 1891614			py Valley Sou			"00		_
rill Start							e: 08:1 0		,	nsin, P.G. #8356		By: B. Marta		P.G.	#83	56	_
rill Finis							ne: 08:1 8		Drilling Contractor: B.I		Field Instr	umentation: I	N/A				_
epth 1st				N/A			ne: N/A		Drill Rig Type/Method:								_
epth H ₂ 0						te / Tin	ne: N/A		Driller's Name: B. Cis			T					_
ommen										Well Comp. Date:		Completion					_
	: Har	nd trov	vel (sc	oil pla	aced in	stainl	ess steel	l sleeve)		Soil Backfill Date:	06-01-2009	Backfill Time			8:20		_
Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s s							SM	Silty Sand, p	pale brown (10YR 6/3),	medium dense, dry	[Alluvium]				10	50	4
××					-	A COLOR		Total Depth Sandstone.	= 0.3 ft (3 in.); refusal o	n weathered Chats	worth Formatio	n					
								Collected so	oil sample S001 at 08:18	3.							
					1-			Backfilled w	ith native soil.								
					+												
					2-												
					4												
					3-												
					3												
					+												
					4-												
					_												
					5-												
					+												
					6-												
]												
					_												
					7-												
					+												
					8-												
					1												
					9-												
																	1

<u> </u>		ИW				1_		11 /60 -		Boring ID: HZB								—
			(in.): 2					th (ft): 0			Sampling - Outfall							_
Northi				396.10				t): 179 5		Job Number: 1891614			ppy Valley Sou					
				1-2009				e: 15:1		Logged By: B. Marta	asin, P.G. #8356	Reviewed	By: B. Marta	ısin,	P.G.	#83	56	
Drill Fi	inish	Date:	06-0	1-2009	9			ne: 15:1		Drilling Contractor: B.I	L. Hall	Field Instr	umentation: I	N/A				_
Depth	1st	H₂O (f	t):		N/A	Da	ate / Tin	ne: N/A		Drill Rig Type/Method:	Slide Hammer							_
Depth	H ₂ C) After	Drilling	g (ft): I	N/A	Da	ate / Tin	ne: N/A		Driller's Name: B. Cis	neros							
Comm	ents	s: Veg	etatio	n at s	urfac	ce					Well Comp. Date:	N/A	Completion	Time	e: N	N/A		
Sampl	lers:	Slid	le ham	nmer v	with:	stainle	ss stee	l sleeve	T		Soil Backfill Date:	06-01-2009	Backfill Time			5:17		
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s					·	•	SM	Silty Sand, p	pale brown (10YR 6/3),	medium dense, dry	, rootlets [Alluv	ium]	10	10	20	20	
						-			Total Depth :	= 0.5 ft; terminated price	or to refusal							+
										il sample S001 at 15:1								
						1-	1			•	. .							
									Backfilled wi	th native soil.								
						-	1											
						2-												
						-												
						-												
						3-												
						_												
						4-												
						-	1											
						5												
						•												
						-	1											
						6-	1											
						-												
						7												
						7-	1											
						-												
						8-												
						-												
						9-	1											
						-												
																		- 1

W		ЛW							Boring ID: HZBS0116					_
			(in.): 2					th (ft): 0						_
lorthi				84.93				t): 1795				"00		_
			06-0					e: 08:2			P.G	. #83	56	_
		Date. H₂O (f	06-0		N/A			ne: 08:2 ne: N/A	Drill Rig Type/Method: Slide Hammer	IN/A				-
			Drillin					ne: N/A	Driller's Name: B. Cisneros					-
			etatio				107 1111	10. 1477	Well Comp. Date: N/A Completio	n Time	e: I	N/A		_
ampl							ss stee	l sleeve	Soil Backfill Date: 06-01-2009 Backfill Tir			08:27	,	
<u> </u>												% o		il
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s				П	0-		SM	Silty Sand, pale brown (10YR 6/3), loose, dry, rootlets [Alluvium]				60	-
						-	24442 24442		Total Depth = 0.5 ft; terminated prior to refusal.	+				ł
									Collected soil sample S001 at 08:25.					
						1-			Backfilled with native soil.					
						-			Dagamina Will Haliya soli.					
						2-								
						-								
						3-								
						-								
						4-								
						-								
						5-								
						-								
						6-								
						-								
						7-								
						8-								
						3								
						9-								
						-								

	MW	Н						Boring ID: HZBS0117						_
orehole							th (ft): 0							_
lorthing			31.21				t): 1795		_		D C	шо -		
rill Start						art Time		Logged By: B. Martasin, P.G. #8356 Reviewed By:			P.G.	#83	56	
rill Finis							ne: 08:4	Drilling Contractor: B.L. Hall Field Instrume	entation: N /	Α				_
epth 1s epth H ₂				N/A			ne: N/A	Drill Rig Type/Method: Slide Hammer Driller's Name: B. Cisneros						_
commen						ite / Till	ic. N/A		ompletion T	ime	· N	I/A		-
amplers						ss stee	l sleeve		ackfill Time:			8:43		_
								·				% of		il
Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description		Gravel	Coarse Sand	Med. Sand	Fine Sand	
s					Ū		SM	Silty Sand, pale brown (10YR 6/3), loose, dry, rootlets [Alluvium]					60	
×					-	1494414		Total Depth = 0.5 ft; terminated prior to refusal.						t
								Collected soil sample S001 at 08:41.						
					1-									
								Backfilled with native soil.						
					-									
					_									
					2-									
					-									
					3-									
					-									
					4-									
					-									
					5-									
					-									
					6-									
					-									
					7-									
					-									
					8-									
					•									
					9-									
					3									
					_									
	1			1		1					1			-1

		VН						Boring ID: HZBS0118					_
		n. (in.):					th (ft): 0						_
orthin			678.0				t): 1795				"00		_
		e: 06					e: 09:2			P.G	. #83	56	_
	isti Da Ist H₂C	te: 06	01-200	N/A			ne: 09:2 ne: N/A	Drilling Contractor: B.L. Hall Field Instrumentation: Drill Rig Type/Method: Slide Hammer	N/A				-
		er Drilli	na (ft)				ne: N/A	Driller's Name: B. Cisneros					_
		egetati				107 1111	ic. IWA	Well Comp. Date: N/A Completio	n Time	e: I	N/A		_
ample						ss stee	l sleeve	Soil Backfill Date: 06-01-2009 Backfill Ti			9:27	,	_
;										Est.	% o	f So	il
Retained	Recovery	Blow Gount/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Coarse Sand	Med. Sand	Fine Sand	
	3				U	•	SM	Silty Sand, pale brown (10YR 6/3), loose, dry, rootlets [Alluvium]	10	10	25	30	
					-			Total Depth = 0.5 ft; terminated prior to refusal.					t
					1			Collected soil sample S001 at 09:26.					
								Backfilled with native soil.					
					-								
					2-								
					_								
					3								
					4								
					-								
					5-								
					_								
					6-								
					7-								
					-								
					8								
					-								
					9-								
					-								

W	_	ИW							Boring ID: HZBS0119							_
			(in.): 2					th (ft): 0	Project: SSFL ISRA Sampling - Outfall							_
lorthi				32.29				t): 1795			py Valley Sou		D ~	# ^^	FC	—
			06-0 06-0					e: 08:5 ne: 08:5	Logged By: B. Martasin, P.G. #8356 Drilling Contractor: B.L. Hall		By: B. Marta umentation: N		r.G.	. #83	56	
		H₂O (f			v/A			ne: N/A	Drill Rig Type/Method: Slide Hammer	Fleid instr	umentation: r	N/A				_
			Drillin					ne: N/A	Driller's Name: B. Cisneros							_
								chunks		N/A	Completion ¹	Time	e: 1	N/A		_
Samp								l sleeve	Soil Backfill Date:		Backfill Time			8:57	,	
<u> </u>													Est.			il
Sample intervar Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s					U		SM	Silty Sand, light yellowish brown (10YR 6/4), loose, dry,	rootlets [Fill]		5	15	20	25	
*						+	ABAGA		Fotal Depth = 0.5 ft; terminated prior to refusal.							t
						1-			Collected soil sample S001 at 08:55.							
						']			Backfilled with native soil.							
						-										
						2-										
						3-										
						-										
						4-										
						-										
						5-										
						6-										
						7-										
						-										
						8-										
						3										
						1										
						9-										
						-										
					1									1	l	

<u> </u>	_	MW				1_		11 /60 -		Boring ID: HZB								—
		Diam.						th (ft): 0			Sampling - Outfall							_
North				325.49				t): 179		Job Number: 1891614			ppy Valley Sou					
		Date:						e: 09:0			asin, P.G. #8356		By: B. Marta		P.G.	#83	56	
		n Date:		1-2009	9			ne: 09:0		Drilling Contractor: B.I		Field Instr	rumentation:	N/A				_
		H₂O (f	-		N/A			ne: N/A		Drill Rig Type/Method:								_
Depth	n H₂C	O After	Drillin	g (ft): I	N/A	Da	ate / Tin	ne: N/A		Driller's Name: B. Cis	neros							
Comr	nent	s: Veg	getatio	n at s	urfac	ce					Well Comp. Date:	N/A	Completion	Time	e: N	N/A		
Samp	lers	Har	nd trov	vel (so	oil pl	laced ii	n stainl	ess stee	el sleeve)		Soil Backfill Date:	06-01-2009	Backfill Time			9:05		
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Silh Cand		Description	rocklete [Alling	i mal	Gravel	Coarse Sand	% of Med. Sand	S Pine Sand 85	
	s							SM	Silly Sariu, p	pale brown (10YR 6/3),	medium dense, dry	, rootiets [Alluv	iuiiij		5	10	45	
\otimes						-			Total Donth	= 0.5 ft; terminated price	or to refusal							+
						1-			Collected so	oil sample S001 at 09:03	3.							
						•			Backfilled wi	ith native soil.								
						-	1											
						2-	1											
						_												
						3-	1											
						_												
						4	1											
						-												
						_												
						5-	1											
						-	-											
						_												
						6-												
						-	1											
						7-												
						•												
						-	1											
						8-												
						-												
						-	1											
						9-												
						-	1											
						10-												

	M					1.				Boring ID: HZB								_
	le Diar							th (ft): 0			Sampling - Outfall							_
Northir	g (ft):	26	659°	1.26		Ea	sting (f	t): 179 5	5874.46	Job Number: 1891614	<u> </u>	Site: Haj	opy Valley Sou	th				_
	art Dat							e: 09:1		Logged By: B. Marta		Reviewed	By: B. Mart a	sin,	P.G.	#83	56	_
Orill Fi	nish Da	te: 06	6-01-	2009		Fir	nish Tin	ne: 09:1	5	Drilling Contractor: B.I	L. Hall	Field Inst	rumentation: I	N/A				
Depth	1st H₂C) (ft):		N	I/A	Da	te / Tin	ne: N/A		Drill Rig Type/Method:	Slide Hammer							_
Depth	H₂O Af	er Dril	ling ((ft): N	I/A	Da	te / Tin	ne: N/A		Driller's Name: B. Cis	neros							
Comm	ents: V	egeta	tion	at su	ırfac	e					Well Comp. Date:	N/A	Completion	Time	e: N	N/A		
Sample	ers: S	lide h	amm	ner w	ith s	stainle	ss stee	l sleeve			Soil Backfill Date:	06-01-2009	Backfill Time			9:18		
Sample Interval Retained	Sample Type Recovery	Blow	Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		ſ	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s					0	•	SM	Silty Sand, p	pale brown (10YR 6/3),	loose, dry, rootlets [Alluvium]		10	15	15	30)
						-			Total Depth	= 0.5 ft; terminated price	or to refusal.							+
						1-			Collected so	il sample S001 at 09:1	0.							
									Backfilled wi	ith native soil.								
						_												
						•												
						2-]											
						-												
						3-												
						_												
						4-												
						-												
						5												
						5-]											
						-												
						6-												
						_												
						7-												
						-												
						8-												
						J												
						-												
						9-												
						_												
						_												

	MW								Boring ID: HZB\$							
orehole							th (ft): 0			Sampling - Outfal						
orthing			983.19				t): 1796		Job Number: 1891614			py Valley Sou				
rill Start							e: 09:2			sin, P.G. #8356	Reviewed	By: B. Marta	sin,	P.G.	#83	56
rill Finis	h Date	: 06-0	1-2009	9	Fin	ish Tin	ne: 09:2	1	Drilling Contractor: B.I	Hall	Field Instru	umentation: N	N/A			
epth 1s				N/A	Da	te / Tin	ne: N/A		Drill Rig Type/Method:	Hand Trowel						
epth H ₂	O After	Drillin	g (ft): I	N/A	Da	te / Tin	ne: N/A		Driller's Name: B. Cis	neros						
ommen	ts: Be	drock v	within	1 inc	ch of s	urface				Well Comp. Date:	N/A	Completion	Time	: N	I/A	
amplers	: No	sampl	e colle	ected	1					Soil Backfill Date:	N/A	Backfill Time			I/A	
Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		С	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand So
					U	**********		Total Depth	= 0.1 ft; terminated on 0	Chatsworth Format	on Sandstone					
											on canadione.					
					1			Unable to co	ollect sample due to sha	illow bedrock.						
					1-											
					4											
					2-											
					7											
					3-											
					4											
					4-											
					.											
					1											
					5-											
					-											
					6-											
					J_											
					1											
					7-											
					4											
					8-											
					0-											
					+											
					9-											
					7											
	i		l .	1 1									1	1	i 1	

	MW								Boring ID: HZBS								_
Borehole							th (ft): 1			Sampling - Outfall 0	09 Area						_
Northing (91.32		Ea	asting (f	:): 1796	6403.65	Job Number: 1891614		Site: Hap	py Valley Sou	ıth				_
Drill Start			1-2009				: 11:1			sin, P.G. #8356	Reviewed	By: B. Marta	ısin,	P.G	#83	56	
Orill Finisl							ne: 11:2		Drilling Contractor: B.L		Field Instr	umentation: I	N/A				
Depth 1st				N/A			ne: N/A		Drill Rig Type/Method:	_							_
Depth H ₂ 0						ate / Tim	ne: N/A		Driller's Name: B. Cis								
Comment										Well Comp. Date: N		Completion			N/A		
Samplers	: Slid	e han	nmer v	vith s	stainle	ss stee	l sleeve	I		Soil Backfill Date: 0	6-01-2009	Backfill Time			1:25		
Sample Interval Retained Sample Type	Ž	<u>.</u>	E	-evel	feet)	: Log	soil		г	Description					% of		
	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification						Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
S S					-		SM	Silty Sand, p	oale brown (10YR 6/3), o	dense, dry [Alluvium]						60	40
					-			*	reddish yellow (7.5YR 6								
					2-				= 1.9 ft; refusal on weat		rmation Sand	dstone.					
					_	_			oil samples S001 and S0 oith auger cuttings.	001SP at 11:17.							
					- 4-			Buokinieu W	itir dager outtings.								
						_											
					_												
					6-												
					-												
					_												
					8-												
					_												
					10-	-											
					-	-											
					12-	-											
					_	-											
					14-	-											
					-	-											
					16-												
					-												
					18-												
					_												l

									_
									_
	_		_	_	_	_			_
P.G.	, P.	1, P	1, P.	, P.	Ρ.(.G.			_
—									—
—									_
									_
N/A									
09:3									
Sample Type Sampl				Fine Sand					
								25	
T									_
+									
+							4		\dashv
1									

<u>w</u>	MW	/H							Boring ID: HZ	BS0124							
orehole	Diam.	(in.): 3	3		Tot	tal Dep	th (ft): 1	1.8	Project: SSFL IS	RA Sampling - Outfall	009 Area						
orthing	(ft):	2669	984.61		Eas	sting (f	t): 179 6	6412.23	Job Number: 1891	614	Site: Hap	py Valley Sοι	ıth				
rill Start	Date:	06-0	1-2009	9	Sta	art Time	e: 10:5	55	Logged By: B. M	artasin, P.G. #8356	Reviewed	By: B. Mart a	asin,	P.G.	#83	56	
rill Finis	h Date	: 06-0	1-2009	9	Fin	ish Tin	ne: 11:0)5	Drilling Contractor:	B.L. Hall	Field Instru	umentation:	N/A				
epth 1st				N/A			ne: N/A		Drill Rig Type/Meth								_
epth H ₂ 0	O After	Drillin	g (ft): I	N/A	Da	te / Tin	ne: N/A		Driller's Name: B.								
ommen										Well Comp. Date:		Completion	Time		I/A		
amplers	: Gra	b fron	n auge	er hea	d coll	ected v	with han	nd trowel (pla	ced in sleeve)	Soil Backfill Date:	06-01-2009	Backfill Tim			1:08		
Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
S S					0		SM	Silty Sand	, pale brown (10YR 6	(3), medium dense, dry	, rootlets [Alluvi	um]	5	10	20	30	3
					-			▼ become	es reddish yellow (7.5°	/R 6/8), grades coarse	· [Weathered Sa	andstone]	10	20	15	25	3
					2-			Total Dept	th = 1.8 ft; refusal on v	veathered Chatsworth I	Formation Sand	stone.					T
					4			Collected s	soil samples S001 an	d D001 at 10:58.							
					4				with auger cuttings.								
					4			Dackilleu	with auger cuttings.								
					4-												
					1												
					_]												
					6-												
					1												
					+												
					-												
					8-												
					4												
					4												
					10-												
					10												
					1												
					7												
					+												
					12-												
					+												
					4												
					4												
					14-												
					_												
					46												
					16-												
					+												
					\dashv												
					+												
					18-												
					4												
					4												
				1 1	7												1

	ИW				Τ_	4-15	41- 750		Boring ID: HZBS		1000 4						
Borehole I							th (ft): 8			Sampling - Outfal							_
Northing (83.68				t): 1796		Job Number: 1891614			py Valley Sou			_		
Orill Start			1-2009				e: NR		Logged By: A. Golde			By: V. Vatha		ın, P	.G.		
Orill Finish							ne: NR		Drilling Contractor: En		Field Instr	umentation: I	N/A				
Depth 1st				N/A			ne: N/A		Drill Rig Type/Method:								_
Depth H ₂ C							ne: N/A		Driller's Name: A. Go								
Comment										Well Comp. Date:		Completion			N/A		
Samplers:	Gral	sam	ple co	llect	ed in 6	3-inch	stainless	steel sleeve		Soil Backfill Date:	10-06-2009	Backfill Time			8:30		
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Oith Oranda		Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s					1-		SM	and rootlets	dark yellowish brown (10 , no odor, no staining [F	ill]			5	10	25	30	
s					2		SM	Silty Sand, c	dark yellowish brown (10)YR 4/4), dense, m	oist, no odor, no	o staining		10	35	25	
					7 8 9			Total Depth Collected so	very pale brown (10YR = 8.5 ft; refusal on Cha oil samples S001 and So ith auger cuttings.	sworth Formation S	Sandstone.						

Retained Sample Type Recovery (%) Blow Count/6" PID (ppm) Water Level Classification Graphic Log Gravel Gravel Coarse Sand Med. Sand Sample Type Recovery (%) Mater Level Graphic Log Graphic Log Gravel Gravel Gravel Gravel Fine Sand Sand Sand Sand Sand Sand Sand Sand		MW	/H							Boring ID: HZB	S0125							
## Profit of the Computer Service For Profit of Service For Prof	Borehole	Diam.	(in.): 3	1		Тс	otal Dep	oth (ft): 0	.5			008 Area						
III Start Date: 06-39-2009 Start Time: 09-55 Logged Biy: S. Dowson Reviewed Biy: M. Milman-Barris, P.G. Property of the Property of)						ļ	Site: Hap	py Valley Sou	ıth				
Bit Finish Date: 08-93-2009 Finish Time: 1002 Diffinish Christopher Mod. Americal Competition MA Diffinish Christopher Milke Hoebin. Soli Backfill Date: 08-30-2009 Backfill Time: NA Competition Time: NA Description Des			06-3	0-200	9										arris	, P.C	€.	
polyth Galfard Politing (file): NA Date: Time: NA Date: Time: NA Date: Time: NA Date: Time: NA Date: Make: Make Hoshs Comments: Sample located 4 ft S of sephatic road, just \$0 wood retaining wall well Comp. Date: NA Completion Time: NA Date: N																		
Description																		
				g (ft):	N/A													
Total Depth = 0.5 Tota									t S of wood re			N/A	Completion	Time	: N	I/A		
Best Work of So purg august a series of the second properties and the second properties are second propert																		
Pure group of the pure group o	Samplers: Grab sample collected in 6-inch stainless steel sleeve Soil Backfill Date: 06-30-2009 Backfill Time: 10:05 Est. % of Soil Retained Level and L							il										
SMML Silly Sand / Sandy Standy	Sample Interv Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)					-			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clav
Total Depth = 0.5 ff; terminated prior to refusal. Collected soil sample S001 at 10:00. Backfilled with auger cuttings.	∭ s					·		SM/ML	Silty Sand / present [All	′ Sandy Silt, tannish brov luvium]	wn, loose, moist, fine	e sandstone gr	avel, mica	10	5	10	25	50
Collected soil sample S001 at 10:00. Backfilled with auger cuttings.						-		:			or to refusal							_
Backfilled with auger cuttings.									•	•								
2- 3- 3- 5- 5- 7- 3-						1-					o.							
3- 4- 5- 6- 7- 8-						-												
3- 4- 5- 6- 7- 8-	Backfilled with auger cuttings.																	
4- 5- 6- 7- 8-						2-												
4- 5- 6- 7- 8-						_												
4- 5- 6- 7- 8-	Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 10:00. Backfilled with auger cuttings.																	
5- 6- 7- 8-		SMML Sitty Sand / Sandy Sitt, tannish brown, loose, moist, fine sandstone gravel, mica 10 5 10 25 present [Alluvium] Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 10:00. Backfilled with auger cuttings.																
5- 6- 7- 8-																		
5- 6- 7- 8-						-	-											
5- 6- 7- 8-																		
5- 6- 7- 8-						4												
6- 7- 8-						-												
6- 7- 8-																		
6- 7- 8-						-	1											
6- 7- 8-																		
8-						5-	-											
8-																		
8-						_	1											
8-																		
8-						6												
8-						0-												
8-																		
8-						-	1											
8-																		
						7-	-											
						_	-											
						0_												
9-						0												
						-	1											
						9-	1											
						-	1											
10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-						40												

	<u>(</u>	MW	/H							Boring ID: HZB	S0126							
Borol				<u> </u>		T-	otal Da	oth (ft): ^	5	<u> </u>		I NNS Aros						
North			(in.): 3	357.07	,			oth (ft): 0 ft): 1795		Job Number: 189161	A Sampling - Outfall		py Valley Sou	ıth				
		Date:		0-200				e: 09:4		Logged By: S. Daw			By: M. Milm		arric	. P (
			: 06-3					ne: 09:5		Drilling Contractor: B		I	rumentation:		airis	, г.с	<i>,</i>	
		t H ₂ O (N/A			ne: N/A		Drill Rig Type/Method:		T ICIG IIIO	unionation.	WA				
Comments: In vegetated gully 6 ft N of paved road, 20 ft S of gravel road Samplers: Grab sample collected in 6-inch stainless steel sleeve Soil Backfill Date: 06-30-2009 Backfill Time: Est. Description Description SM Silty Sand, tannish brown, loose, moist, trace sandstone gravel, mica present tr 15								: N	I/A									
Sample collected in 6-inch stainless steel sleeve Sampler: Grab sample collected in 6-inch stainless steel sleeve Sampler: Grab sample collected in 6-inch stainless steel sleeve Sampler: Grab sample collected in 6-inch stainless steel sleeve Blow Count/6 Description Description Grab sample collected in 6-inch stainless steel sleeve Description Description							9:55											
Samplers: Grab sample collected in 6-inch stainless steel sleeve Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Est. % of Soil Backfill Date: 06-30-2009 Backfill Time: 09:55 Backfill Tim				il														
Sample Inter- Retained	Sample Type	S SM					1				-			_	Coarse	Med.		Silt/Clay
	s		SM Sil [A					SM	Silty Sand, [Alluvium]	, tannish brown, loose, n	noist, trace sandston	ne gravel, mica	present	tr	15	10	35	40
						-			Total Depti	h = 0.5 ft; terminated pri	or to refusal.							
						1_			Collected s	soil sample S001 at 09:5	50.							
		1-							Backfilled	with auger cuttings.								
Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 09:50. Backfilled with auger cuttings.																		
						,												
						-	-											
	SM Silty Sand, tannish brown, loose, moist, trace sandstone gravel, mica present tr 15 10 [Alluvium] Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 09:50. Backfilled with auger cuttings.																	
						3-	-											
	Bod La Gland Bod L																	
						4-	-											
							-											
						5-												
						_												
						6-												
						_												
						'-												
						-	1											
						8-	1											
						-	1											
						9-	1											
						-	1											
		l	L	1		10_									L			1

Corebo	_	WW Diam		<u> </u>		т.	tal Don	th (ft).		Boring ID: HZB Project: SSFL ISRA		008 8200						_
		Diam.		967.38				th (ft): 0			Sampling - Outfall		www.Valley.Com	.4h	LIV6	•		_
Northin		Date:						t): 1795 e: 09:1		Job Number: 1891614			ppy Valley Sou				_	_
				0-2009						Logged By: S. Daws			By: M. Milm		arris	5, P.C	J .	_
				0-2009				ne: 09:2		Drilling Contractor: B.I		Field Insti	rumentation: I	N/A				_
		H₂O (f	•		N/A			ne: N/A		Drill Rig Type/Method:								_
				g (ft): I				ne: N/A		Driller's Name: Mike I								_
									er substation		Well Comp. Date:		Completion			N/A		
	lers:	Gra	b sam	iple co	ollect	ted in 6	3-inch s	stainless	steel sleeve		Soil Backfill Date:	06-30-2009	Backfill Time			9:25		_
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		ι	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s					Ū	•	SM	Silty Sand, Id	oose, dry, sandstone gr	ravel, mica present	[Alluvium]		10		20	30	
\otimes						_												
									Total Depth :	= 0.5 ft; terminated price	or to refusal.							
									Collected so	il sample S001 at 09:20	0.							
						1-												
									Packfilled wit	th auger cuttings.								
						-												
						2-												
						-												
						_												
						3-												
						_												
						4												
						_												
						5-												
						_												
						_												
						6-												
						-												
						7-												
						,-												
						-												
						8-												
						-												
						_												
						9-												
						•												
						_												
				1	1 1	10-	1							1			l	

rob	_						th (ft).	5	Boring ID: HZB : Project: SSFL ISRA	Sampling - Outfall	NNS Aros						_	
										•				41- 1		_		_
										Job Number: 1891614			opy Valley Sou					
										Logged By: S. Daws			By: M. Milm		arrıs	i, P.G	j.	
									2	Drilling Contractor: B.I		Field Inst	rumentation: I	N/A				
										Drill Rig Type/Method:								_
						•				Driller's Name: Mike I								
										6-inch water pipe	Well Comp. Date:		Completion	Time		I/A		
ampl	lers	: Gra	b sam	ple co	ollect	ted in 6	3-inch s	stainless	steel sleeve		Soil Backfill Date:	06-30-2009	Backfill Time			9:47		
Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		ι	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	1
Ī	s					_0_		SM	Silty Sand,	dark brown, loose, mois	t, mica present [Allu	/ium]				10		
						_			- · · · · · · ·	0.75								L
									Total Depth	= 0.5 ft; terminated price	r to refusal.							
						1-			Collected so	oil sample S001 at 09:4	5.							
						1-7			Backfilled w	ith auger cuttings.								
										3								
						1												
						2-												
						-												
						3-												
						3												
						-												
						4-												
						7												
						5-												
						-												
						6												
						6												
						-												
						7-												
						7												
						8-												
						-												
						9-												
						3												
						+												

() (ΜW	/H							Boring ID: HZB	S0129							
Borel	_		(in.): 3	<u> </u>		Т,	ntal De	oth (ft): 0	5		Sampling - Outfal	II NNS Aras						
North				948.82	,			ft): 1796		Job Number: 189161			opy Valley Sou	th - I	U//C	21		
		Date:		4-200				e: 08:1			an-Barris		By: S. Valer					
			: 07-1					ne: 08:1		Drilling Contractor: B .		I	rumentation: I		а, г.	G.		
		H ₂ O (N/A			me: N/A	1	Drill Rig Type/Method:		i leid ilist	idinentation. I	WA.				
											_							
	ments: Dry, loose soil with little dried vegetation at surfaction plers: Grab sample collected in 6-inch stainless steel sleet								at curface	Diller's Name. Wike		. N/A	Completion	Timo	. N	I/A		
	mments: Dry, loose soil with little dried vegetation at surface mplers: Grab sample collected in 6-inch stainless steel sleeve																	
Retarined Samplers: Dry, loose soil with little dried vegetation at surface Soil Backfill Date: N/A								il										
Sample Interva	Sample Type	SP P									-			Gravel	Coarse Sand	Med. Sand		Silt/Clay
	s		SP Po						Poorly Grad	ded Sand, reddish brow	n, loose, dry, weak	cementation		5	80	15		
		Тс							Total Donth	b = 0.5 ft; terminated pri	or to refusal							
		1-								soil sample S001 at 08:1	7.							
									Backfilled v	with auger cuttings.								
	SP Poorly Graded Sand, reddish brown, loose, dry, weak cementation 5 80 15 Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 08:17.																	
	SP Poorly Graded Sand, reddish brown, loose, dry, weak cementation 5 80 15 Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 08:17. Backfilled with auger cuttings.																	
						2-	-											
		2 —																
	SP Poorly Graded Sand, reddish brown, loose, dry, weak cementation 5 80 15 Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 08:17. Backfilled with auger cuttings.																	
	SP Poorly Graded Sand, reddish brown, loose, dry, weak cementation 5 80 15 Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 08:17. Backfilled with auger cuttings.																	
	Description Description D																	
	Description Description D																	
	SP Poorly Graded Sand, reddish brown, loose, dry, weak cementation 5 80 15 Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 08:17. Backfilled with auger cuttings.																	
						4-												
	SP Poorly Graded Sand, reddish brown, loose, dry, weak cementation 5 80 15 Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 08:17. Backfilled with auger cuttings.																	
							-											
						5-												
							1											
						6-	4											
						7-	-											
							1											
						8-	1											
							4											
						_ a _												
						9-												
	6-																	
	4- 5- 6- 7- 8-																	
						10_												

Borehole Diam. (in.): 3 Total Depth (ft): 0.5 Project: SSFL ISRA Sampling - Outfall 008 Area Northing (ft): 266958.59 Easting (ft): 1796272.38 Job Number: 1891614 Site: Happy Valley South - HVS-2A Drill Start Date: 07-14-2009 Start Time: 08:20 Logged By: S. Valenzuela Reviewed By: M. Milman-Barris, P.G. Drill Finish Date: 07-14-2009 Finish Time: 08:25 Drilling Contractor: B.L. Hall Field Instrumentation: N/A Depth 1st H ₂ O (ft): N/A Depth 1st H ₂ O (ft): N/A Depth H ₃ O After Drilling (ft): N/A Date / Time: N/A Date / Time: N/A Driller's Name: Ben Cisneros Comments: Hummocky terrain, exposed soil with sparse grass and debris at surface Well Comp. Date: N/A Samplers: Grab sample collected in 6-inch stainless steel sleeve Description Description Description ML Silt with Sand, yellowish brown (10YR 5/4), medium stiff, dry, low dry strength, some rootlets, concrete debris [Sifted Alluvium] Total Depth = 0.5 ft; terminated prior to refusal.																		
		(ft): 266958.59 Easting (ft): 1796272 t Date: 07-14-2009 Start Time: 08:20 sh Date: 07-14-2009 Finish Time: 08:25 st H ₂ O (ft): N/A Date / Time: N/A nts: Hummocky terrain, exposed soil with sparse s: Grab sample collected in 6-inch stainless sta												•		—		
																		_
															arris	, P.C	€	
												Field Inst	rumentation: I	N/A				_
			•															_
Depth H ₂ O After Drilling (ft): N/A Date / Time: N/A Driller's Name: Comments: Hummocky terrain, exposed soil with sparse grass and debris at surface Samplers: Grab sample collected in 6-inch stainless steel sleeve Comments: Hummocky terrain, exposed soil with sparse grass and debris at surface sample collected in 6-inch stainless steel sleeve Comments: Hummocky terrain, exposed soil with sparse grass and debris at surface surface spanning of the control of																		
			nmocl	ky terr	ain,	expose	ed soil	with spa	rse grass and	debris at surface	Well Comp. Date:	N/A	Completion	Time	e: N	I/A		
	lers:	Gra	b sam	ple co	llec	ted in 6	inch s	stainless	steel sleeve		Soil Backfill Date:	07-14-2009	Backfill Time					
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log								_		Fine Sand	
	s							ML	Silt with Sand some rootlets	d, yellowish brown (10) s, concrete debris [Sifte	/R 5/4), medium stif ed Alluvium]	f, dry, low dry	strength,			tr	25	
X						-	. 1 . 1 . 1		Total Depth =	= 0.5 ft; terminated price	or to refusal.							t
									Collected soi	l cample S001								
						1-				•								
									Backfilled wit	th auger cuttings.								
						4												
						2												
						2-												
						-												
						3-												
						1												
						4-												
						4												
						_												
						5-												
						-												
						6-												
						1												
						7-												
						-												
						۰												
						8-												
						+												
						9-												
						-												
						٦												
	- 1				1 1		1		i e					1	1	1		

Northing (ft): 266992.08 Easting (ft): 1796284.76 Job Number: 18910 Drill Start Date: 07-14-2009 Start Time: 08:33 Logged By: M. Mi Drill Finish Date: 07-14-2009 Finish Time: 08:33 Drilling Contractor: Depth 1st H ₂ O (ft): N/A Date / Time: N/A Drill Rig Type/Method Depth H ₂ O After Drilling (ft): N/A Date / Time: N/A Driller's Name: Mile Comments: Dry soil covered with dried vegetation at surface, no debris Samplers: Grab sample collected in 6-inch stainless steel sleeve					000 4						_							
			·								Sampling - Outfall							_
													py Valley Sοι					_
										7 7	an-Barris		By: S. Valer		la, P.	G.		_
rill F	inis	h Date	: 07-1	4-2009	9				3	Drilling Contractor: B.	L. Hall	Field Instr	umentation: I	N/A				_
										Drill Rig Type/Method:								_
						•				Driller's Name: Mike								_
			soil c	overe	d wit	h dried	d veget	ation at	surface, no d	ebris	Well Comp. Date:	N/A	Completion		e: N	N/A		_
Samplers: Grap sample collected in 6-inch stainless steel sleeve Samplers: Grap sample collected in 6-inch stainless steel sleeve Samplers: Grap sample collected in 6-inch stainless steel sleeve Blow Count/6" Description Description Description Grap sample collected in 6-inch stainless steel sleeve Est. % or provided in 6-inch stainless steel sleeve Description Description Description		8:35		_														
	ype			_	lev	et)	Log	il ation							_			_
Retained	Sample 7	Recover (%)	Blow Count/6"	PID (ppm	Water Le	Depth (fe	Graphic							Gravel	Coarse S			0:14/0
	s							SP			n, medium dense, dr	y, weak to mod	derate			10	90	
\						_	70-170-170		Total Depth	n = 0.5 ft; terminated prior	or to refusal.							_
						1-				•	5.							
						-			Backfilled w	viiri auger cuttings.								
						2-												
						-												
						3-												
						-												
						4-												
						_												
						5 —												
						6-												
						-												
						7 —												
						8-												
						-												
						9-												
						-												

orehole	Diam	(in \· 3	<u> </u>		Ta	tal Dan	oth (ft): 0		Boring ID: HZBS	Sampling - Outfall	008 Area						_
)39.87						•			my Vallay Cay	ıth.	LIVE	24		_
lorthing							t): 1796		Job Number: 1891614			py Valley Sou				_	_
rill Start							e: 08:3		Logged By: S. Valen			By: M. Milm		arris	5, P.C	J .	
rill Finis							ne: 08:3		Drilling Contractor: B.I		Field Instr	rumentation:	N/A				_
epth 1s				N/A			ne: N/A		Drill Rig Type/Method:								_
epth H ₂							ne: N/A		Driller's Name: Ben C			_					_
							tion at su			Well Comp. Date:		Completion			N/A		_
	: Gra	ıb sam	iple co	ollect	ted in 6	S-inch s	stainless	steel sleeve		Soil Backfill Date:	07-14-2009	Backfill Tim			8:35		
Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s					0-		ML	Silt with San strength [Sif	nd, yellowish brown (10) ted Alluvium]	/R 5/4), medium sti	ff, dry, nonplas	tic, low dry			tr	25	
					-			Total Depth	= 0.5 ft; terminated prior	r to refusal.							+
								•	·								
					1			Collected so	oil sample S001.								
								Backfilled w	ith auger cuttings.								
					_												
					_												
					2-												
					_												
					3-												
					-												
					4												
					_												
					-												
					5-												
					-												
					6												
					-												
					_												
					7-												
					-												
					o												
					8-												
					-												
					9-												
					•												
					-												
	i l		i .	1										4			

Pore!	M						tal D -	th /#\: •		ID: HZB		1000 4						_
Boreho			-					th (ft): 0			Sampling - Outfal							—
Northir				78.02				t): 1796		ber: 1891614			ppy Valley Sοι					_
				4-2009				e: 08:4		•	an-Barris		d By: S. Valer		a, P.	G.		
				4-2009				ne: 08:4		ontractor: B.		Field Inst	rumentation: I	N/A				_
Depth					N/A			ne: N/A		-	Hand Auger							_
-				g (ft): N		•		ne: N/A		lame: Mike								
Comm	ents:	Dry l	bare s	soil wi	ith g	ravel-s	ize asp	halt pie	es and concrete debri	at surface	Well Comp. Date:	N/A	Completion	Time	e: I	N/A		
	ers:	Grat	sam	ple co	llect	ted in 6	3-inch s	stainless	steel sleeve		Soil Backfill Date:	07-14-2009	Backfill Time			8:48		
Sample Interval Retained	Sample Type Recovery	(%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		1	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s					Ū		SP	Poorly Graded Sand, one coarse sand-size	reddish brow piece of porc	n, medium dense, d ælain-like debris [Fil	ry, moderate c l]	ementation,		10	10	80	
\times						-	130-030-030		Total Depth = 0.5 ft;	erminated prid	or to refusal.							t
									Callasted sail sample	C001 at 00:4	7							
						1-			Collected soil sample	3001 at 08:4	ι.							
									Backfilled with auger	cuttings.								
						_												
						2-												
						2-												
						-												
						3-												
						_												
						4												
						-												
						5												
						5												
						-												
						6												
						_												
						7-												
						-												
						8-												
						0												
						-												
						9-												
						_												
																		- 1

Roreh	امام	Diam.	(in)· 3	<u> </u>		To	tal Den	oth (ft): 0	Boring ID: HZBS0134 Project: SSFL ISRA Sampling - Outfall 008 Area						_
Vorthi)37.77				t): 1796		w South	۰ ـ ـ ـ	1//6	21		_
		Date:		4-2009				e: 08:3	Logged By: S. Valenzuela Reviewed By: N						_
		บลเษ. า Date						ne: 08:4	Drilling Contractor: B.L. Hall Field Instrumenta			aiiis	, г.с	.	
		H ₂ O (1			N/A			ne: N/A	Drill Rig Type/Method: Hand Auger	1011. 14/	^_				_
		O After						ne: N/A	Driller's Name: Ben Cisneros						_
										letion Ti	ima		I/A		_
										ill Time:			8:45		_
	1615	. Gra	ID Sali	ipie co	JileCi	teu iii t	J-IIICII S		SUII BACKIIII DATE. 07-14-2003 BACK	III TIIIIE.			% of		il.
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description		Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s							CL	Lean Clay with Sand, yellowish brown (10YR 5/6), medium stiff, dry, low to medium plasticity, medium dry strength, trace rootlets [Sifted Alluvium]				5	20	ľ
						-	<i>[////</i> /		Total Depth = 0.5 ft; terminated prior to refusal.						t
									Collected soil sample S001.						
						1			Backfilled with auger cuttings.						
									Daominica with augus outtings.						
						-									
						2-									
						_									
						3-									
						_									
						4-									
						_									
						5-									
						_									
						_									
						6-]								
						-									
						7-									
						7-									
						_									
						8-									
						•									
						_									
						9-									
						•									
						_									
				l .	1 1	10-	1			1			i		-1

Roreh	nole	Diam.	(in \· 3	<u> </u>		Tot	tal Den	th (ft): 0		Boring ID: HZB\$ Project: SSFL ISRA	Sampling - Outfall	I NOS Ares						_
													ny Vallar Car	ıth '	U\/0	2 4		_
North				78.49				t): 1796		Job Number: 1891614			py Valley Sou					_
		Date:						e: 08:5			an-Barris		By: S. Valer		a, P.	G.		
		n Date						ne: 09:0		Drilling Contractor: B.L		Field Instr	umentation: I	N/A				_
		H ₂ O (f			N/A			ne: N/A		Drill Rig Type/Method:								_
		O After						ne: N/A		Driller's Name: Mike I								
Comr	nent	s: In 3	-ft-dee	ep dra	inage	e filled	with v	egetatio	n (removed), a	djacent to road	Well Comp. Date:	N/A	Completion	Time	: N	I/A		
Samp	lers	: Gra	b sam	ple co	ollect	ed in 6	inch s	tainless	steel sleeve		Soil Backfill Date:	07-14-2009	Backfill Time			9:00		
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		С	Description			Gravel	Coarse Sand is	Med. Sand	Fine Sand 8	
	S							SP	Poorly Grade [Alluvium]	ed Sand, reddish brown	, medium dense, d	ry, weak cemer	ntation		5	25	70	
8						+	Menden		Total Denth	= 0.5 ft; terminated prio	r to refusal							+
									·									
						1-			Collected so	il sample S001 at 09:00).							
						.			Backfilled wi	th auger cuttings.								
						1												
						2-												
						4												
						3-												
						4												
						4-												
						47												
						+												
						5-												
						+												
						6-												
						1												
						7-												
						_												
						8-												
						4												
						9-												
						4												

	MV	/H							Boring ID: HZB	 S0136							
Borehol	n Diam	(in): 3	,		Те	stal Day	oth (ft): 0	· E	T T	Sampling - Outfall 0	ne Aroa						
				,					,			wy Vallay Car	ıth l	UV6	24		
Northing			97.78				ft): 1796		Job Number: 1891614			ppy Valley Sou					
Drill Sta			4-200				e: 08:5		Logged By: S. Valer			By: M. Milm		arrıs	, P.C	j.	
Drill Fini							me: 09:0	0	Drilling Contractor: B.		Field Insti	rumentation:	N/A				
Depth 1				N/A			me: N/A		Drill Rig Type/Method:								
Depth H	•						me: N/A		Driller's Name: Ben (
Comme	nts: In	draina	ge fille	ed w	ith hea	vy bru	sh, burnt	vegetation or	n top (removed)	Well Comp. Date: N	N/A	Completion		: N	I/A		
Sample	s: Gr	ab san	ple c	ollec	ted in	6-inch	stainless	steel sleeve		Soil Backfill Date: 0	7-14-2009	Backfill Tim			9:00		
Sample Interval Retained	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		1	Description			Gravel	Coarse Sand :	Med. Sand 일	Fine Sand	Silt/Clay
s					_0-		SM	Silty Sand, o	dark brown (10YR 3/3), ed from sandstone, trace	medium dense, angu e burnt debris [Alluviur	lar to subang	ular coarse		5	25	50	
								Total Depth	i = 0.5 ft; terminated price	or to refusal.							
								Collected so	oil sample S001.								
					1-	1											
								Backfilled w	vith auger cuttings.								
					-	-											
					,												
					2-]											
					-	-											
					3-	1											
						-											
					_												
					4-	1											
						_											
					5-	1											
						1											
					6-	1											
						1											
					_												
					7-	1											
						-											
					_												
					8-	1											
						4											
					9-	1											
						1											
		1			10-												

((MW	/H							Boring ID: HZB	S0137							
Borol				<u> </u>		T-	otal Dar	oth (ft): 0	5	T T		I OOR Area						
			(in.): 3	124.01			_			Job Number: 189161	A Sampling - Outfal		yny Vallay Ca	uth I	LIVE	24		
North				4-200				ft): 1796 e: 09:1 !			nan-Barris		ppy Valley So					
		Date:	: 07-1					ne: 09:1		Drilling Contractor: B			By: S. Vale umentation:		а, Р.	G.		
					N/A				<u> </u>			Fleid Ilisti	umentation.	IN/A				
		H ₂ O (me: N/A		Drill Rig Type/Method:								
			Drillin					ne: N/A	rface no deb	Driller's Name: Mike	Well Comp. Date:	NI/A	Completion	Time		N/A		
									rface, no deb	115	Soil Backfill Date:		Completion Backfill Tim			9:20		
	JIEIS	. Gi	ab Saii	ipie c	Ollec	leu III	0-IIICII		Steel Sieeve		Soil Backilli Date.	07-14-2009	Dackilli Till			% of		il.
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s							SP	Poorly Grad	ded Sand, reddish brow	n, medium dense, d	Iry, moderate ce	ementation,			10	90	
\bowtie							(319/319) (317/317)		ary organio	is (sticks)								
									Total Depth	n = 0.5 ft; terminated pri	ior to refusal.							
									Collected so	oil sample S001 at 09:2	20.							
						1-	1			·								
									Backfilled w	with auger cuttings.								
							-											
						2-												
						_												
							1											
						3-	-											
						4-	1											
							-											
						5-												
						5												
						'	1											
1																		
1						6-	+											
1																		
1						_												
						7-	1											
1																		
							+											
1																		
						8-												
						"												
1						'	1											
						9-	-											
1																		
						.												
		1		1	1	40								1	1	1		1

Corebo		MW Diam		<u>.</u>		To	tal Dan	th (ft): ^	Boring ID: HZBS0138 5 Project: SSFL ISRA Sampling - Outfall 008 Area					—
			(in.): 3					th (ft): 0						_
Northin				109.79				t): 1796						
		Date:		4-2009				e: 09:0	, ,		sarrı	s, P.0	j.	
				4-2009				ne: 09:0		N/A				
		H ₂ O (f	•		N/A			ne: N/A	Drill Rig Type/Method: Hand Auger					_
				g (ft): I				ne: N/A	Driller's Name: Ben Cisneros			1/A		
								vy brus	·			N/A		_
	ers:	Gra	D San	ipie co	DIIECI	tea in c	o-inch s		steel sleeve Soil Backfill Date: 07-14-2009 Backfill Tir			09:05 % o		-il
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Sand	Med. Sand	Fine Sand	
	s							CL	Lean Clay with Sand, yellowish brown (10YR 5/4), medium stiff, dry, medium plasticity, medium dry strength [Sifted Alluvium]			5	15	3
						-	/////		Total Depth = 0.5 ft; terminated prior to refusal.					+
									Collected soil cample S001					
						1-			Collected soil sample S001.					
									Backfilled with auger cuttings.					
						-								
						2-								
						-								
						-								
						3-								
						4-								
						_								
						5								
						5 -								
						_								
						6-								
						7-								
						_								
						8-								
						0								
						-								
						9-								
	- 1			1	1 1		1			- 1	1	1	1	-1

Borob		WN Diam	(in.): 3	1		T_	tal Don	th (ft): 0	Boring ID: HZBS0139 5 Project: SSFL ISRA Sampling - Outfall 008 Area					
Vorthi				148.87				t): 1796		.4h	LIV6	24		_
		Date:		4-2009				e: 09:3						_
				4-2009				ne: 09:3			а, г.	G.		
		H₂O (f			N/A			ne: N/A	Drill Rig Type/Method: Hand Auger	N/A				_
			•	g (ft): I				ne: N/A	Driller's Name: Mike Hoehn					_
									face, no debris Well Comp. Date: N/A Completion	Time	· •	N/A		
									steel sleeve Soil Backfill Date: 07-14-2009 Backfill Tim			9:37	,	
	<u> </u>	Gia	D Saii	ipie co		teu iii (J-111C11 8		Steel Sieeve Soli Backlill Date. 01-14-2003 Backlill Tilli			% of		il.
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Gravel	Coarse Sand	Med. Sand	Fine Sand	.07.1.0
	s							SP	Poorly Graded Sand, reddish brown, medium dense, dry, angular gravel, coarse sand derived from sandstone, moderate cementation, dry organics (sticks)	5	5		90	
∞						_	130-030-030		Total Depth = 0.5 ft; terminated prior to refusal.					+
									Collected soil comple S001 at 00:27					
						1-			Collected soil sample S001 at 09:37.					
									Backfilled with auger cuttings.					
						_								
						2-								
						_								
						-								
						3-								
						_								
						4								
						_								
						5								
						5								
						-								
						6-								
						_								
						7-								
						-								
						8-								
						Ü								
						-								
						9-								
						_								
				l .	1 1		1			1	1	1		-1

Borehol	le Diar	n (in)	. 3			To	tal Den	th (ft): 0		ID: HZB	A Sampling - Outfal	I 008 Area						_
Northing			7234	1 73				t): 1796		ber: 189161			py Valley Sοι	ıth -	HVS	-2Δ		_
Orill Sta				2009				e: 09:1		By: S. Val e			By: M. Milm				2	_
Drill Fin								ne: 09:2		ontractor: B			umentation:		allis	, г.ч	J.	
Depth 1			-1		I/A			ne: N/A			: Hand Auger	T ICIU IIISU	umentation.	W/A				_
Depth F			lina (ne: N/A		lame: Ben	_							_
									face, near small bus		Well Comp. Date:	N/A	Completion	Time	· I	N/A		_
									teel sleeve	l	Soil Backfill Date:		Backfill Time			9:20		_
	15.	1 40 50	anipi	e coi	necu	eu III C	-ilicii s		iteel Sieeve		Soil Backilli Date.	07-14-2009	Dackilli Tilli			% of		٠il
Retained	Recovery	Blow	County	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	5							ML	Silt with Sand, dark y rootlets [Sifted Alluvi	ellowish brov ım]	vn (10YR 4/4), soft, c	lry, low dry stre	ngth, some		tr	10	15	,
						-	. 1]:].		Total Depth = 0.5 ft;	erminated pr	ior to refusal.							+
									•	•								
						1-			Collected soil sample	5001.								
									Backfilled with auger	cuttings.								
						2-												
						-												
						_												
						3-												
						-												
						4-												
						4												
						5-												
						5												
						+												
						6-												
						0-7												
						-												
						7-												
						']												
						+												
						8-												
						-												
						9-												
						-												
						-												
		1	- 1			10								1	1	1	l	

orehol	le Dia	m. (ir	ղ.)։ 3			Tot	tal Deni	th (ft): 0 .		Boring ID: HZB Project: SSFL ISR	A Sampling - Outfal	l 008 Area					_
orthing			-	96.40				:): 1796		Job Number: 189161			py Valley Sοι	ıth - I	HVS-	-2A	_
rill Sta								: 09:49			nan-Barris		By: S. Valer				
rill Fin								ne: 09:5 0		Drilling Contractor: B			umentation: I		,		
epth 1					N/A			ne: N/A		Drill Rig Type/Method:							
epth F								ne: N/A		Driller's Name: Mike							
-	-									t surface, no debris	Well Comp. Date:	N/A	Completion	Time	e: N	I/A	
ample									steel sleeve	,	Soil Backfill Date:		Backfill Time			9:50	
5	Recovery		Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description					Med. Sand	oil
						0		SP	Poorly Grad	led Sand, reddish brow	n, loose, weak ceme	entation, sticks	and			10	
						-			T. I.D. II	0.5.6.1							_
									lotal Depth	= 0.5 ft; terminated pri	or to retusal.						
						1-			Collected so	oil sample S001 at 09:5	50.						
						.			Backfilled w	ith auger cuttings.							
										-							
]											
						2-											
						+											
						3-											
						4											
						4-											
						7											
						1											
						_											
						5-											
						+											
						6-											
						_											
						7-											
						′ ¬											
						1											
						8-											
						-											
						9-											
						-											
						1											
	1				1 1									1	i .	ı I	

Diam	(in \· •			Ta	tal Don	th (ft). n	5	Boring ID: HZBS		OOR Area						
								•			nny Valloy Sou	th	LIV/C	24		_
																_
											-		arris	5, P.C	J.	_
										Fleid Insti	umentation: r	N/A				_
	•								_							_
								Driller's Name: Ben C			Ta					_
				_												—
Gra	b sam	ple co	ollect	ted in 6	5-inch s	tainless	steel sleeve		Soil Backfill Date:	07-14-2009	Backfill Time					_
Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification						Gravel	Sand	Med. Sand	Fine Sand	
				·		CL	Sandy Lean plasticity, me	Clay, yellowish brown (edium dry strength	10YR 5/4), medium	stiff, dry, low t	o medium			10	20)
				-			Total Depth :	= 0.5 ft: terminated prio	r to refusal.							+
				1-			Collected so	ıı sampie S001.								
							Backfilled wit	th auger cuttings.								
				_												
				_												
				2-												
				-												
				3-												
				_												
				4-												
				_												
				_												
				5-												
				-												
				6-												
				•												
				_												
				7-												
				_												
				8-												
				-												
				9												
				3												
			1	_	1							1	1	1	l	-1
	ft): Date: Date: H ₂ O (f O After s: At t : Gra	ft): 2672 Date: 07-1 n Date: 07-1 H ₂ O (ft): O After Drillin S: At bottom Grab sam	Date: 07-14-2009 n Date: 07-14-2009 H ₂ O (ft): 0 After Drilling (ft): 1 s: At bottom of cli : Grab sample co	ft): 267225.36 Date: 07-14-2009 n Date: 07-14-2009 H ₂ O (ft): N/A D After Drilling (ft): N/A S: At bottom of cliff, existing the sample collect	ff): 267225.36 Ea Date: 07-14-2009 Sti n Date: 07-14-2009 Fin H ₂ O (ft): N/A Da O After Drilling (ft): N/A Da S: At bottom of cliff, exposed: Grab sample collected in 6 (%) Mater Level (hpm) Mater Level (hpm) 1— 2— 4— 4— 4— 6— 6—	ff): 267225.36 Easting (ff) Date: 07-14-2009 Finish Time in Date: N/A Date / Time in Date: Office N/A Date / Time in Date: Off	fft): 267225.36 Easting (fft): 1796 Date: 07-14-2009 Start Time: 09:2: n Date: 07-14-2009 Finish Time: 09:3: H ₂ O (fft): N/A Date / Time: N/A S: At bottom of cliff, exposed soil at surface: Grab sample collected in 6-inch stainless Grab (was) (%) (mod)	ft): 267225.36 Easting (ft): 1796331.44 Date: 07-14-2009 Start Time: 09:25 n Date: 07-14-2009 Finish Time: 09:35 H ₂ O (ft): N/A Date / Time: N/A Date / Time: N/A Date / Time: N/A S: At bottom of cliff, exposed soil at surface Grab sample collected in 6-inch stainless steel sleeve CL Sandy Lean plasticity, me Total Depth Collected so Backfilled with a surface 2- 4- 4- 5- 6- 7- 8- 8-	fit): 267225.36	fily: 267225.36 Easting (ft): 1796331.44 Job Number: 1891614 Date: 07-14-2009 Slart Time: 09:25 Dilling Contractor: BL. Hall H.O (ft): N/A Date / Time: N/A Drilling (ft): N/A Drilling (ft): N/A Date / Time: N/A Drilling (ft): N/	### SP7225.36 Easting (ft): 1796331.44 Job Number: 1891614 Site: Hag Date: 07-14-2009 Start Time: 09:25 Logged By: S. Valenzuela Reviewed Hydrotheod: But. Hall Field Inst. Hydrotheod: But. Hydrotheod: But. Hall Field Inst. Hydrotheod: But. Hydr	### According to the control of the	nt): a27223.8 Easting (tt): 1796.331.44 Job Number: 1891614 Site: Happy Valley South—Date: 07.14.2009 Start Time: 09.25 Logged By; S. Valenzuels Reviewed By; M. Milman-Fill Hottle, 199.35 Drilling Contractor: B.L. Hall Field Instrumentation: NA Date (Time: NA) Deal Firms: NA	### According to the control of the	10. 22725.36 Earling (TI): 1798331.44 Job Number: 1891614 Size: Happy Vallery South - HVS-ZA Date: 07-14-2009 Start Time: 09.25 Logade [by S. Valenzuela Reviewed By: M. Milmer Barris, P. K. Holling Contractor: B.L. Hall Field instrumentation: N/A Date / Time: 09.35 Drilling Contractor: B.L. Hall Field instrumentation: N/A Date / Time: MA Date / Tim	10. 26725.8 Se Salting (III) 1796331.44 Job Number: 1891614 Site: Happy Valley South - HVS-2A Conget Syr. S. Avidence and Bredevined Syr. M. Milman-Barris, P.G. 150 (IV). NA Date / Time. 192.5 Conget Syr. S. Avidence and Bredevined Syr. M. Milman-Barris, P.G. 150 (IV). NA Date / Time. NA Diff Syl Type/fide/fixed Fand Auger / Avidence State Syl

Borehol	e Diam.	(in \. 3	3		To	tal Den	th (ft): 0	Boring ID: HZBS0143 Project: SSFL ISRA Sampling - Outfall 008 Area					_
lorthing			, 191.22	,			t): 1796		South	шу	2-24		_
	rt Date:		4-2009				e: 10:1						_
								, ,			'.G.		
	ish Date						ne: 10:1		: N/A				_
	st H ₂ O (N/A			ne: N/A	Drill Rig Type/Method: Hand Auger					_
	l₂O Afte						ne: N/A	Driller's Name: Mike Hoehn					
								ass and tall shrubs at surface Well Comp. Date: N/A Comple			N/A		
	rs: Gr	ab san	nple co	ollect	ted in 6	3-inch s	stainless	steel sleeve Soil Backfill Date: 07-14-2009 Backfill	Γime:		10:18		
Retained Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description Description	Gravel	Sand	Med. Sand	Fine Sand	
s	;						SP	Poorly Graded Sand, reddish brown, medium dense, dry, moderate cementatio dry grass				100	J
					=	Adada		Total Depth = 0.5 ft; terminated prior to refusal.					+
					1-			Collected soil sample S001 at 10:18.					
								Backfilled with auger cuttings.					
					_								
					2-								
					_								
					•								
					3-								
					_								
					4								
					4-								
					-								
					5-								
					3								
					-								
					6-								
					•								
					-								
					7-								
					•								
					-								
					8-								
					_								
					9-								
					_								
	1	1	1	1 1	10-	1					1	1	

(MW	/H							Boring ID: HZE	S0144							
Borok	aolo	Diam	(in.): 3			Т,	ntal Der	oth (ft): 0	5	<u> </u>	A Sampling - Outfa	III OOR Aroa						
													Valley Cay	.41. 1		20		
North				942.24				ft): 1796		Job Number: 18916			ppy Valley Sou					
		Date:		4-200				e: 09:3		Logged By: S. Vale		I	I By: M. Milm		arris	6, P.C	j.	
			: 07-1					ne: 09:4	0	Drilling Contractor: E		Field Insti	rumentation:	N/A				
		t H ₂ O (N/A			ne: N/A		Drill Rig Type/Method								
			r Drillin					ne: N/A		Driller's Name: Ben								
									covering soi		Well Comp. Date	: N/A	Completion		e: I	I/A		
Samp	olers	: Gr	ab san	iple c	ollec	ted in	6-inch	stainless	steel sleeve)	Soil Backfill Date	: 07-14-2009	Backfill Tim			9:40		
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description				Sand	% Sand	Fine Sand	
Sam Reta	Sam	Recc (%)	Blov	PID	Wate	Dept	Grap	USC Clas						Gravel	Coarse	Med.	Fine	Silt/Clay
	s					0-		SC	Clayey Sar	ınd, yellowish brown (10	YR 5/4), loose, moi	st, no cementation	on [Fill?]	tr	tr	20	50	30
									Total Dept	th = 0.5 ft; terminated pr	ior to refusal							├
									•	soil sample S001.	ior to rotabal.							
						1-				with auger cuttings.								
						2-												
						3-												
						4-												
						7												
						5-												
						6-												
						7-	1											
						8-	-											
							1											
						9-												
						40												

Date Depth (ft): 0.5 Project: SSFL ISRA Sampling - Outfall 008 Area	ilman-li : N/A on Tim	Est	N// 09: t. %	P.G A :50 6 of	
Start Time: O9:40 Logged By: S. Valenzuela Reviewed By: M. Mi	on Time:	Est	N// 09: t. %	P.G A :50 6 of	
Date: 07-14-2009 Finish Time: 09:50 Drilling Contractor: B.L. Hall Field Instrumentation: H ₂ O (ft): N/A Date / Time: N/A Drill Rig Type/Method: Hand Auger After Drilling (ft): N/A Date / Time: N/A Driller's Name: Ben Cisneros On hillside, exposed soil with sparse vegetation at surface Well Comp. Date: N/A Completic Grab sample collected in 6-inch stainless steel sleeve Soil Backfill Date: 07-14-2009 Backfill Times of the property of the propert	on Time:	Est	N// 09: t. %	A :50 6 of	
After Drilling (ft): N/A Date / Time: N/A Drill Rig Type/Method: Hand Auger After Drilling (ft): N/A Date / Time: N/A Driller's Name: Ben Cisneros On hillside, exposed soil with sparse vegetation at surface Well Comp. Date: N/A Completic Grab sample collected in 6-inch stainless steel sleeve Soil Backfill Date: 07-14-2009 Backfill Times of the stainless steel sleeve Description SC Clayey Sand, yellowish brown (10YR 5/4), medium dense, dry, medium to high dry strength, weak cementation [Fill?] Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001.	on Tim	Est	09: t. %	:50 6 of	
After Drilling (ft): N/A Date / Time: N/A Driller's Name: Ben Cisneros Well Comp. Date: N/A Completic Grab sample collected in 6-inch stainless steel sleeve Description Description SC Clayey Sand, yellowish brown (10YR 5/4), medium dense, dry, medium to high dry strength, weak cementation [Fill?] Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001.	ime:	Est	09: t. %	:50 6 of	
Completic Grab sample collected in 6-inch stainless steel sleeve Soil Backfill Date: N/A Completic Soil Backfill Date: 07-14-2009 Backfill Time Description SC Clayey Sand, yellowish brown (10YR 5/4), medium dense, dry, medium to high dry strength, weak cementation [Fill?] Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001.	ime:	Est	09: t. %	:50 6 of	
Grab sample collected in 6-inch stainless steel sleeve Soil Backfill Date: 07-14-2009 Backfill Ti Age Backfill Ti Backfill Ti Backfill Ti Backfill Ti Backfill Ti Backfill Ti Backfill Date: 07-14-2009 Backfill Ti Backfill Ti Backfill Ti Backfill Date: 07-14-2009 Backfill Ti Backfill Date: 07-14-2009 Backfill Ti	ime:	Est	09: t. %	:50 6 of	
Description Collected soil sample S001.	Gravel	Est	t. % ⊇	6 of	
SC Clayey Sand, yellowish brown (10YR 5/4), medium dense, dry, medium to high dry strength, weak cementation [Fill?] Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001.	Gravel	Sand	2		50.
SC Clayey Sand, yellowish brown (10YR 5/4), medium dense, dry, medium to high dry strength, weak cementation [Fill?] Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001.	tr	S			Fine Sand
Collected soil sample S001.		tr	r 2	20	40
Collected soil sample S001.		+		+	-
1-					
Backfilled with auger cuttings.					

Ports!		ЛW		,			tal D -	4b /£1\- 4		Boring ID: HZBS		0.46-11	000 8						—
Boreho								oth (ft): 1		Project: SSFL ISRA		- Outfall							_
Northin				374.18				t): 1796		Job Number: 1891614				ppy Valley Sοι					
Orill Sta							art Time				an-Barris			d By: S. Valer		la, P.	G.		
Orill Fir								ne: 12:5		Drilling Contractor: B.I			Field Inst	rumentation:	N/A				
Depth 1					N/A			ne: N/A		Drill Rig Type/Method:		er							_
Depth I						•		ne: N/A		Driller's Name: Ben C									
Comme	ents	: Bar	e soil	and d	ry ve	egetation	on at si	urface (v	egetation clea	red earlier in day)	Well Com	p. Date:	N/A	Completion	Time	e: N	N/A		
	ers:	Gra	b sam	ple co	ollect	ted in 6	6-inch	stainless	steel sleeve		Soil Backf	fill Date:	07-15-2009	Backfill Tim			2:54		
a N								_								Est.	% o	f So	<u>il</u>
Sample Interval	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description				Gravel	Coarse Sand	Med. Sand	Fine Sand	
	S					1-		SP	cementation Total Depth	= 1.2 ft (14 in.); refusal	on Chatsw							100	
									Collected so	oil sample S001 at 12:53	3.								
									Backfilled w	ith auger cuttings.									
						2-	1			3 3 3 3 3 3 3									
						-	-												
						3-	1												
						-	-												
						4	1												
						-	-												
						_													
						5	1												
						-													
						•													
						6													
						-	1												
						7]												
						,													
						_													
						8-													
						•													
						-	1												
						9-													
						-													
						-	1												
	- 1			1	1 1	10-	1		l						1	1	1	1	

	MW				1_		11 /5% -	Boring ID: HZBS0147						_
Borehole							th (ft): 3	Project: SSFL ISRA Sampling - Outfall 008 Area						
Northing			395.94				t): 1796		Happy Valley Sou					
Orill Star			5-2009				e: 12:4		wed By: S. Vale		la, P	G.		
Orill Finis							ne: 12:4		Instrumentation:	N/A				
Depth 1s		-		N/A			ne: N/A	Drill Rig Type/Method: Hand Auger						_
Depth H ₂							ne: N/A	Driller's Name: Ben Cisneros						
								etation cleared earlier) Well Comp. Date: N/A	Completion	Time		N/A		
	s: Gra	b sam	ple co	llect	ed in 6	S-inch s	stainless	Soil Backfill Date: 07-15-20	9 Backfill Tim			12:46		_
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description		Gravel	Sand	Med. Sand	Fine Sand	T
S					0		SP	Poorly Graded Sand, yellowish brown, medium dense, dry, mode	ate cementation				100	_
					4 —			Total Depth = 3.3 ft; refusal on Chatsworth Formation Sandstone Collected soil samples S001 at 12:42 and S002 at 12:44. Backfilled with auger cuttings.						
					5-									
					6-									
					7- - 8-									
					9-									
					10-									

	MW				1_	4-15	45-750 3		Boring ID: HZB		1.000.1						_
Borehole							th (ft): 2			Sampling - Outfal							
Northing			908.12				t): 179		Job Number: 1891614			ppy Valley Sοι					_
Orill Star			5-2009				e: 12:2			an-Barris	I	By: S. Valer		a, P.	G.		
Orill Fini							ne: 12:3		Drilling Contractor: B.		Field Inst	rumentation: I	N/A				_
Depth 1s				N/A			ne: N/A		Drill Rig Type/Method:								_
Depth H					•		ne: N/A	•	Driller's Name: Ben C								_
Commer	nts: 10	ft from	grave	el roa	ad; bar	e soil,	dry vege	etation, and sca	attered road gravel	Well Comp. Date:	N/A	Completion	Time		N/A		_
	s: Gr	ab san	ple co	ollect	ted in 6	6-inch	stainless	s steel sleeve		Soil Backfill Date:	07-15-2009	Backfill Time			IR		_
Sample interval Retained Sample Type	2 2	<u> </u>	(F	evel	eet)	Log	oil cation			No contest on			I	Sand			
Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s					1-		SP	Poorly Grade [Fill]	ed Sand, yellowish brov	wn, medium dense,	dry, moderate	cementation				100	
s					2-			▼ becomes	dark yellowish brown, l	oose, dry to moist,	no cementatior	1					
×								Total Depth	= 2.2 ft; refusal on Cha	tsworth Formation	Sandstone.						H
					-												
								Collected so	il samples S001 at 12:2	27 and S002 at 12:3	34.						
					3-			Backfilled wi	th auger cuttings.								
					4												
					9-												

	, ₍₁	ЛW	H							Boring ID: HZB	 S0149							
Boreho				<u> </u>		Т	ntal Der	oth (ft): 0	5	T T	Sampling - Outfall	I NNS Area						
Northir				954.59				ft): 1795		Job Number: 189161			py Valley Sou	ıth - I	U//Q	2		
Drill St				5-200				e: 12:0			an-Barris		By: S. Valer					
Drill Fi								ne: 12:0		Drilling Contractor: B .		1	rumentation:		а, г.	G.		
Depth					N/A			ne: N/A	0	Drill Rig Type/Method:		i leiu ilisti	umentation.	WA.				
Depth								ne: N/A		Driller's Name: Ben (
									shrubs, no de		Well Comp. Date:	NI/A	Completion	Timo	. N	l/A		
									steel sleeve	eniis	Soil Backfill Date:		Backfill Tim			2:08		
	13.	Gia	ib Saii	ipie c		ieu iii	U-IIICII		Sieel Sieeve		Soil Backlill Date.	07-13-2009	Dackilli Tilli			% of		il
Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	s							SP	Poorly Grad	ded Sand, dark yellowis	h brown, loose, dry,	no cementation	n [Alluvium]				100	
						_			Total Depth	n = 0.5 ft; terminated pri	or to refusal.							
									Collected so	oil sample S001 at 12:0	8.							
						1-	1			•	.							
									Backfilled w	with auger cuttings.								
						-	1											
						2-	-											
						-	1											
						3-	1											
						_	1											
						4-	1											
						-	-											
						5-	-											
						-												
						6-	1											
						-	1											
						7-												
						,-												
						-	1											
						8-	-											
						-	1											
						9-	1											
						_	1											
						40												
	1_				1	40								1		i .		

Corebo		WW Diam	(in.): 3	<u> </u>		To	tal Don	oth (ft): 0		ing ID: HZB	A Sampling - Outfal	I NNR Aros						_
				190.18									ny Vallay Cay	ıth	шие	•		_
lorthin								t): 1796		Number: 189161			py Valley Sou					_
		Date:		5-2009				e: 13:1		•	nan-Barris		By: S. Valer		a, P	G.		
				5-2009				ne: 13:1		ng Contractor: B		Field Instr	umentation: I	N/A				_
-		H₂O (f	•		N/A			ne: N/A		Rig Type/Method:								_
				g (ft): I				ne: N/A	Drill	er's Name: Ben								
							n at su				Well Comp. Date:		Completion			N/A		_
	lers:	Gra	b sam	ple co	ollect	ted in 6	3-inch s	stainless	steel sleeve		Soil Backfill Date:	07-15-2009	Backfill Time			3:16		_
Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
	s							SP	Poorly Graded S	and, dark yellowis	sh brown, loose, dry,	no cementation	1				100)
\otimes																		
									Total Depth = 0.	ft; terminated pri	ior to refusal.							
									Collected soil sa	mple S001 at 13:1	16.							
						1-												
									Backfilled with a	iger cuttings.								
						-												
						2-												
						-												
						-												
						3-												
						-												
						4-												
						5												
						6-												
						-												
						_												
						7-												
						-												
						8-												
						0												
						_												
						9-												
						9												
						-												
																		Į
				1	1	10-									1	1		

		ΜV	/Н							Boring ID: HZB	S0151							
oreh	ole	Diam	(in.): 3	3		To	tal Der	oth (ft): 0 .		•	A Sampling - Outfall	008 Area						_
lorth				968.46	•			ft): 1795		Job Number: 189161			py Valley Sοι	ıth - I	HVS	.1		_
		Date:		1-200				e: 08:5 0		Logged By: A. Ruo			By: M. Milm				•	
			: 07-0					ne: 08:5 7		Drilling Contractor: B		I	umentation:		arris	,	<u>, </u>	
		: H ₂ O (N/A			ne: N/A		Drill Rig Type/Method:		T leid illisti	umentation.	WA.				_
			_					ne: N/A										
			Drillin							Driller's Name: Ben		NI/A	Completion	T:		1/4		
										sampling, no debris	Well Comp. Date:		Completion			I/A		—
	lers	: Gra	ab san	іріе с	ollec	tea in (6-inch	stainiess	steel sleeve		Soil Backfill Date:	07-01-2009	Backfill Time			9:04		<u></u>
Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
*	S							SM	Silty Sand, o [Native]	dark yellowish brown (1	10YR 4/4), very loose	e, dry, mica pre	sent	tr	10	20	40	30
						-			Total Depth	= 0.5 ft; terminated pri	or to refusal.							-
									Collected so	oil sample S001.								
						1-	1											
									Backfilled w	ith auger cuttings.								
						-	-											
						2-												
						-	1											
						_												
						3-												
						-	-											
						4-	1											
						-	-											
						_												
						5-	1											
						-	-											
						6−												
						-	-											
						_												
						7-	1											
						-	-											
						8-												
						-	-											
						_												
						9-	1											
						-	-											
			1	l	1 1													1

Borehole	MW		<u> </u>		Т-	stal Dan	th (ft). 4		Boring ID: HZB Project: SSFL ISR		I NNS Aros						_
							th (ft): 1			Sampling - Outfall			.41.		_		_
Northing			787.23				t): 1795		Job Number: 189161			py Valley Sou				_	
Orill Start			1-2009				e: 10:4		Logged By: A. Ruo			By: M. Milm		arris	S, P.C	j.	
Orill Finis							ne: 10:4		Drilling Contractor: B		Field Instr	umentation: I	N/A				
Depth 1st				N/A			ne: N/A		Drill Rig Type/Method:	-							_
Depth H ₂ 0							ne: N/A		Driller's Name: Ben		NI/A	0	T :		1/4		
									d prior to sampling)	Well Comp. Date:		Completion			N/A		
	: Gra	ib sam	ipie co	DIIEC	tea in (b-inch s		steel sleeve		Soil Backfill Date:	07-01-2009	Backfill Time			10:51 % of		
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s					1-		SM	mica presen	= 1.0 ft; terminated pri		gravel, no cen	nentation,	tr	10	20	40	3
					-			Collected so	oil sample S001.								
								Backfilled w	ith auger cuttings.								
					2-												
					_												
					-												
					3-	-											
					-												
					4	-											
					-												
					5-												
					-	1											
					6-												
					-												
					7-												
					_												
					8	1											
					-												
					_												
					9-	1											
					-												
			1	1 [1		1	l	1

	MW		,			4-15	41- /ft\ *		Boring ID: HZBS		1.000 4						—
Borehole							th (ft): 1			Sampling - Outfal							_
lorthing			779.42				t): 1795		Job Number: 1891614			ppy Valley Sοι					
orill Start						art Time			Logged By: A. Ruote			d By: M. Milm		arris	s, P.0	3	
rill Finis							ne: 11:0		Drilling Contractor: B.I		Field Inst	rumentation:	N/A				
epth 1st		-		N/A			ne: N/A		Drill Rig Type/Method:								_
epth H ₂ 0					•		ne: N/A		Driller's Name: Ben C			T					
Commen	s: Hea	avy ve	getatio	on re	moved	d prior 1	to samp	ling, no debris	1	Well Comp. Date:	N/A	Completion	Time	e: I	N/A		
	: Gra	b sam	ple co	ollect	ted in 6	6-inch s	stainless	steel sleeve		Soil Backfill Date:	07-01-2009	Backfill Tim			11:05		
<u> </u>							_								% o	f So	il
Sample interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification			Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
s					1-		SM	Silty Sand, y mica preser	yellowish brown (10YR \$ nt [Native]	5/4), loose, dry, fine	gravel, no cer	mentation,	tr	10	20	40	3
					-	334349		Total Depth	= 1.5 ft; terminated prior	r to refusal.							\vdash
					2-			Collected Sc	oil sample S001.								
								Backfilled w	ith auger cuttings.								
					_												
					3-	1											
					_												
					4	1											
					_												
					5-	†											
					_												
					_												
					6-	†											
					_												
					_												
					7-	1											
					_												
					_												
					8	1											
					-												
					0												
					9]											
					-												
			1	1 1		1		i .					1	1	1		

	MΝ	/H							Boring ID: HZB	S0154							
Borehole			<u> </u>		т.	tal Da	oth (ft): 1	0	<u> </u>	Sampling - Outfal	I NNS Aros						
Northing			95.49	,			ft): 1795		Job Number: 1891614			py Valley Sou	ıth _ l	HVS.	2C		
Drill Star			1-200				ie: 13:2 :		Logged By: A. Ruot			By: M. Milm				`	_
Drill Finis							me: 13:2		Drilling Contractor: B.			umentation:		uiiic	,	·	
Depth 1s				N/A			me: N/A		Drill Rig Type/Method:		1 1010 11100						
Depth H ₂		_					me: N/A		Driller's Name: Ben (
								no debris		Well Comp. Date:	N/A	Completion	Time	: N	I/A		
Samplers	s: Gra	ab san	iple c	ollec	ted in	6-inch	stainless	steel sleeve		Soil Backfill Date:	07-01-2009	Backfill Tim	e:	1	3:25		
val.							_						E		% of	So	il
Sample Interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	© USCS Soil ⊠ Classification	Silty Sand	brown (10YR 4/3), loos	Description	o cementation	mica	r Gravel	Coarse Sand	Med. Sand	% Fine Sand	
s					1-			present [Na	n = 1.0 ft; terminated pri		o comentation,		u		20		
					_			Collected se	oil sample S001.								
								Backfilled w	with auger cuttings.								
					2												
					2-												
					-	1											
					3-	1											
					-												
					4-												
					•												
					-												
					5-	1											
					-	1											
					6-	-											
					-	-											
					7-												
					, -												
					-	1											
					8-												
					-	1											
					9-	-											
1					_												
					40												

	MW				T_	4-1 5	41- (ft) *		Boring ID: HZB		000 4						_
Borehole				,			th (ft): 1			Sampling - Outfall							_
lorthing			74.97				t): 1796		Job Number: 1891614			py Valley Sοι					—
Orill Start							e: 12:4		Logged By: A. Ruot			By: M. Milm		arris	, P.C)	
rill Finis							ne: 12:4 8		Drilling Contractor: B.		Field Instr	umentation: I	N/A				_
epth 1st				N/A			ne: N/A		Drill Rig Type/Method:								_
epth H ₂							ne: N/A		Driller's Name: Ben C			1					_
Commen	ts: In s	mall c	learin	g sur	round	led by I	neavy ve	getation, no de	ebris	Well Comp. Date:	N/A	Completion	Time		I/A		_
	: Gra	b sam	ple co	ollecte	ed in 6	6-inch s	stainless	steel sleeve		Soil Backfill Date:	07-01-2009	Backfill Tim			2:57		_
Sample interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		ı	Description			Gravel	Coarse Sand	Med. Sand	Fine Sand	
ň & iš	\$ €	шç	ᇫ	>	٥ <u>–</u>	Ō	SM	Silty Sand, b	rown (10YR 4/3), loose	e, dry, no cementatio	n, mica preser	nt [Native]	tr	් 10	20	正 30	
					_			Sandstone	weathered [Chatsworth	Earmation1							
								Sanusione, v	weathered [Chatsworth	Formation							
×==					1-												
s					•												
× 3																	l
					-			Total Depth	= 1.5 ft; terminated price	or to refusal.							t
								Collected co	il sample S001.								
					2-	1											
								Backfilled wi	th auger cuttings.								
					_												
					3-												
					_												
					4	1											
					-												
					_												
					5												
					-												
					6												
					0												
					-	1											
					7-												
					•												
					-	†											
					8-												
					-	1											
					9-												
					-	1											
			1	1 1	10-	1							1	1	1		

thing (ft): 266961.12 Easting (ft): 1795939.68 Job Number: 189	Ruotolo B.L. Hall nod: Hand Auger len Cisneros Well Comp. Da	Site: Haj Reviewed Field Inst	ppy Valley Soud By: M. Milmrumentation:	an-E			
Start Date: 07-01-2009 Start Time: 13:11 Logged By: A. I Finish Date: 07-01-2009 Finish Time: 13:12 Drilling Contractor th 1st H ₂ O (ft): N/A Date / Time: N/A Driller's Name: E Inments: Surface covered with vegetation (removed prior to sampling), no debris Inplers: Grab sample collected in 6-inch stainless steel sleeve	Ruotolo B.L. Hall nod: Hand Auger len Cisneros Well Comp. Da	Reviewed Field Inst	d By: M. Milm	an-E			
Finish Date: 07-01-2009 Finish Time: 13:12 Drilling Contractor th 1st H ₂ O (ft): N/A Date / Time: N/A Drill Rig Type/Met th H ₂ O After Drilling (ft): N/A Date / Time: N/A Driller's Name: Enterents: Surface covered with vegetation (removed prior to sampling), no debriscaplers: Grab sample collected in 6-inch stainless steel sleeve	B.L. Hall nod: Hand Auger len Cisneros Well Comp. Da	Field Inst			<u> Barri</u>	s, P	_
th 1st H ₂ O (ft): N/A Date / Time: N/A Drill Rig Type/Met th H ₂ O After Drilling (ft): N/A Date / Time: N/A Driller's Name: E ments: Surface covered with vegetation (removed prior to sampling), no debris applers: Grab sample collected in 6-inch stainless steel sleeve	nod: Hand Auger Sen Cisneros Well Comp. Da	<u>'</u>	rumentation:			, · ·	J.
th H ₂ O After Drilling (ft): N/A Date / Time: N/A Driller's Name: Enterents: Surface covered with vegetation (removed prior to sampling), no debrish plers: Grab sample collected in 6-inch stainless steel sleeve	Well Comp. Da			N/A			
nments: Surface covered with vegetation (removed prior to sampling), no debris	Well Comp. Da						
nplers: Grab sample collected in 6-inch stainless steel sleeve							
a	Soil Backfill Da	ate: N/A	Completion	Time	e: l	N/A	
overy "nt/6" (ppm) er Level th (feet) phic Log ssification		ate: 07-01-2009	Backfill Tim			13:13	
를 <mark>즐</mark> 용 ★ 다 유 유 후 호 호 후 후 후	Description				Sand	Sand %	
			(5)	Gravel		Med. Sand	Fine Sand
SM Silty Sand, brown (10YR 4/3),	oose, dry, no cemen	itation, mica prese	nt [Native]	tr	10	20	30
Total Depth = 1.5 ft; terminated	d prior to refusal.						
Collected soil sample S001.							
2-							
Backfilled with auger cuttings.							
3-							
6-							
8-							
9-							

Ж МWН									Boring ID: HZB	S0157							_
Borehole Diam. (in.): 3 Total Depth (ft): 1.5									Project: SSFL ISRA Sampling - Outfall 008 Area								
Northing (ft): 266966.15 Easting (ft): 1795									Job Number: 1891614 Site: Happy Valley								_
Drill Start Date: 07-01-2009 Start Time: 13:01									Logged By: A. Ruotolo Reviewed By: M. M						, P.C	€.	
Orill Finis							ne: 13:0		Drilling Contractor: B.L. Hall Field Instrumentation: I								_
Depth 1st				N/A			ne: N/A		Drill Rig Type/Method: Hand Auger								_
Depth H ₂ (ne: N/A		Driller's Name: Ben		1/4	0	T :		1/4		_
Comment										Well Comp. Date: N		Completion			1/A		_
Samplers	: Gra	aD San	ipie c	PIIEC	<u>.eu in (</u>	o-inch s		steel sleeve		Soil Backfill Date: 0	7-01-2009	Backfill Time		Est.	3:02 % of		
Sample interval Retained Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification		Description					Sand	Med. Sand		Fine Sand
Reta Sam	% %	Blov		Wat	Depi	Grap							Gravel	_			
s					1-		SM	Silty Sand, I	brown (10YR 4/3), loos	e, dry, no cementation	, mica prese	nt [Native]	tr	10	20	30	
×					-			Total Depth	= 1.5 ft; terminated pri	or to refusal.							İ
					2-			Collected so	oil sample S001.								
								Backfilled w	vith auger cuttings.								
									0 0								
					3-												
					-												
					4-												
					_												
					5												
					-												
					6-												
					-												
					7-												
					•												
					8-												
					-												
					9-												
					_												
																	-1