



Boring ID: **B1BS0172**

Borehole Diam. (in.): 3	Total Depth (ft): 3.0	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1796836.99	Easting (ft): 269264.49	Job Number: 1008208	Site: B1-1 (North)
Drill Start Date: 03-09-2010	Start Time: 10:05	Logged By: J. Wokurka	Reviewed By: C. Carter, P.G.
Drill Finish Date: 03-09-2010	Finish Time: 10:15	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Within former building pad, bare soil surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 03-09-2010	Backfill Time: 10:15

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.4	s			0.4		0		SM	Silty Sand, very dark gray (10YR 3/1), medium dense, moist, contains minor organics, no staining or odor [Fill]				70	30
0.4 - 0.1	s			0.1		3			Silty Sandstone, moist, moderately to slightly weathered, moderately hard, slightly friable [Chatsworth Formation]				80	20
						3			Total Depth = 3.0 ft; terminated due to refusal on bedrock. Collected soil samples S001 and S002. Backfilled with soil cuttings.					

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Boring ID: **B1BS0173**

Borehole Diam. (in.): 3	Total Depth (ft): 3.0	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1797161.08	Easting (ft): 269208.37	Job Number: 1008208	Site: B1-1 (South - Dioxins)
Drill Start Date: 03-17-2010	Start Time: 12:38	Logged By: A. Ruotolo	Reviewed By: C. Carter, P.G.
Drill Finish Date: 03-17-2010	Finish Time: 12:51	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: On barren patch of hillside surrounded by medium dense brush	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 03-17-2010	Backfill Time: 12:51

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, dark grayish brown (10YR 4/2), medium dense, moist, contains roots, mica [Native]	tr	5	40	30	25
						3			Sandstone, light yellowish brown (10YR 6/4), unweathered, very thin clay coating on recovered fragments [Chatsworth Formation] Total Depth = 3.0 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 12:40. Backfilled with soil cuttings.					
						4								
						5								
						6								
						7								
						8								
						9								
						10								

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Boring ID: **B1BS0174**

Borehole Diam. (in.): 3	Total Depth (ft): 1.0	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1797154.24	Easting (ft): 269173.40	Job Number: 1008208	Site: B1-1 (South - Dioxins)
Drill Start Date: 03-17-2010	Start Time: 12:56	Logged By: A. Ruotolo	Reviewed By: C. Carter, P.G.
Drill Finish Date: 03-17-2010	Finish Time: 13:05	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: On barren slope just southwest of drainage divide	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 03-17-2010	Backfill Time: 13:05

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 4/3), medium dense, dry, gravel-size siltstone fragments, contains rootlets, mica [Native]	5	15	40	30	10
						1			Sandstone, light yellowish brown (10YR 6/4), slightly weathered, iron oxidation [Chatsworth Formation] Total Depth = 1.0 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 12:58. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

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Boring ID: **B1BS0175**

Borehole Diam. (in.): 3	Total Depth (ft): 5.0	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1797164.89	Easting (ft): 268920.20	Job Number: 1008208	Site: B1-1 (South - Dioxins)
Drill Start Date: 03-17-2010	Start Time: 10:49	Logged By: A. Ruotolo	Reviewed By: C. Carter, P.G.
Drill Finish Date: 03-17-2010	Finish Time: 11:04	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: On relatively flat, grassy surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 03-17-2010	Backfill Time: 11:04

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
0 - 0.5	S					0		SM	Silty Sand, very dark brown (10YR 2/2), medium dense, moist, contains mica [Native]		tr	30	40	30	
						1									
						2									
						3									
						4			becomes yellowish brown (10YR 5/8), slightly clayey						
4.5 - 5.0	S					5			Sandstone, light yellowish brown (10YR 6/4), slightly weathered [Chatsworth Formation] Total Depth = 5.0 ft; terminated due to refusal on bedrock. Collected soil samples S001 at 10:50 and S002 at 11:02. Backfilled with soil cuttings.						
						6									
						7									
						8									
						9									
						10									

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



Boring ID: **B1BS0176**

Borehole Diam. (in.): 3	Total Depth (ft): 1.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269405.40	Easting (ft): 1796864.02	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-24-2010	Start Time: 08:15	Logged By: A. Goldenberg	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-24-2010	Finish Time: 08:30	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Soil and vegetation at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-24-2010	Backfill Time: 08:40

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			2.3		0		SM	Silty Sand with Gravel, dark yellowish brown (10YR 4/6), medium dense, moist, contains asphalt debris, rootlets, no odor or staining [Fill]	20	5	20	20	35
						1			Sandstone, hard, slightly weathered to unweathered, no odor or staining [Chatsworth Formation] Total Depth = 1.0 ft; refusal on bedrock. One step-out boring 1 ft southeast met similar refusal. Collected soil sample S001 at 08:30. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0177**

Borehole Diam. (in.): 3	Total Depth (ft): 6.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269388.24	Easting (ft): 1796880.25	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-24-2010	Start Time: 08:37	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-24-2010	Finish Time: 09:09	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	
Comments: On gentle slope covered with thick layer of leaves and vegetation		Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve		Soil Backfill Date: 05-24-2010	Backfill Time: 09:11

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 4/3), medium dense, moist, weak cementation [Native]		10	30	50	10	
4.8 - 5.2	s			0.0		5									
Total Depth = 6.0 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil samples S001 at 08:40 and S002 at 08:57. Backfilled with soil cuttings.															

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0178**

Borehole Diam. (in.): 3	Total Depth (ft): 0.8	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269380.58	Easting (ft): 1796898.98	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-24-2010	Start Time: 09:30	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-24-2010	Finish Time: 09:46	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On steep slope with very loose surface soil covered with leaves and twigs	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-24-2010	Backfill Time: 09:47

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.8	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 4/3), loose, dry, few fine gravel, weak cementation, mica present [Native]	5	10	25	50	10
						1			Sandstone, light yellowish brown (10YR 6/4), weathered, unfractured, contains quartz, feldspar, and mica, iron oxidation [Chatsworth Formation] Total Depth = 0.8 ft; refusal on sandstone bedrock. Two step-out borings in two directions met similar refusal. Collected soil sample S001 at 09:33. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0179**

Borehole Diam. (in.): 3	Total Depth (ft): 8.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269384.65	Easting (ft): 1796841.67	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-24-2010	Start Time: 10:02	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-24-2010	Finish Time: 11:16	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	
Comments: On gentle slope withing small group of trees, surrounded by poison oak		Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve		Soil Backfill Date: 05-24-2010	Backfill Time: 11:17

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
0 - 0.5	s			0.0		0		SP	Poorly Graded Sand, dark brown (10YR 3/3), medium dense, moist, weak cementation [Native]		10	35	50	5	
4.5 - 5.0	s			0.0		5									
8.0 - 8.5	s			0.0		8			becomes dark yellowish brown (10YR 3/4)						
Total Depth = 8.5 ft; refusal on sandstone bedrock.															
Collected soil samples S001 at 10:05, S002 at 10:17, and S003 at 11:07.															
Backfilled with soil cuttings.															

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0180**

Borehole Diam. (in.): 3	Total Depth (ft): 1.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269354.97	Easting (ft): 1796888.32	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-24-2010	Start Time: 11:15	Logged By: A. Goldenberg	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-24-2010	Finish Time: NR	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	
Comments: Under oak tree, soil and oak leaves at surface		Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve		Soil Backfill Date: 05-24-2010	Backfill Time: NR

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.2	s			0.2		0		SM	Silty Sand, dark yellowish brown (10YR 4/4), loose to medium dense, moist, friable, contains roots and rootlets, no odor or staining [Native]	10	5	25	25	35
						1			Total Depth = 1.0 ft; refusal on roots. Two step-out borings, 2 ft to west and east, met similar refusal. Collected soil sample S001 at 11:20. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0181**

Borehole Diam. (in.): 3	Total Depth (ft): 5.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269150.48	Easting (ft): 1796837.40	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 14:06	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 14:23	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On flat, sparsely vegetated surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-25-2010	Backfill Time: 14:23

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, yellowish brown (10YR 5/4), medium dense, moist, weak cementation [Fill (possibly native soil from another part of site)]	tr	10	40	40	10
4.5 - 5.0	s			0.0		5			Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 14:12 and S002 at 14:22. Backfilled with soil cuttings.					

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Boring ID: **B1BS0182**

Borehole Diam. (in.): 3	Total Depth (ft): 1.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269245.69	Easting (ft): 1796897.51	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 13:41	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 14:01	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On flat, sparsely vegetated surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-25-2010	Backfill Time: 14:04

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 4/3), medium dense, moist, weak cementation [Fill (possibly native soil from another part of site)]	tr	10	30	50	10
						2			Total Depth = 1.5 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 13:46. Backfilled with soil cuttings.					

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0183**

Borehole Diam. (in.): 3	Total Depth (ft): 1.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269335.82	Easting (ft): 1796946.07	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 12:41	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 12:55	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On flat, sparsely vegetated surface within a group of tall bushes	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-25-2010	Backfill Time: 12:56

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 4/3), medium dense, moist, weak cementation, mica present [Fill (possibly native soil from another part of site)]	5	10	35	40	10
						1			Sandstone, light yellowish brown (10YR 6/4), unweathered, unfractured, competent [Chatsworth Formation] Total Depth = 1.5 ft; refusal on Chatsworth Formation Sandstone. Collected soil sample S001 at 12:43. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0184**

Borehole Diam. (in.): 3	Total Depth (ft): 3.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269360.09	Easting (ft): 1796912.94	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 13:21	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 13:34	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	
Comments: On edge of dirt road, surface covered with weathered hydromulch		Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve		Soil Backfill Date: 05-25-2010	Backfill Time: 13:34

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 4/3), medium dense, moist, weak cementation [Fill (possibly native soil from another part of site)]	tr	10	40	40	10
2.5 - 3.0	s			0.0		3								
Total Depth = 3.5 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil samples S001 at 13:24 and S002 at 13:34. Backfilled with soil cuttings.														

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT_3/30/11



Boring ID: **B1BS0185**

Borehole Diam. (in.): 3	Total Depth (ft): 2.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269374.92	Easting (ft): 1796920.42	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 13:02	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 13:16	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	
Comments: On edge of dirt road, surface covered with weathered hydromulch		Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve		Soil Backfill Date: 05-25-2010	Backfill Time: 13:16

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 4/3), medium dense, dry, weak cementation [Fill (possibly native soil from another part of site)]	tr	10	40	40	10
						2			Total Depth = 2.0 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 13:09. Backfilled with soil cuttings.					
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0186**

Borehole Diam. (in.): 3	Total Depth (ft): 12.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269411.08	Easting (ft): 1796899.96	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 08:44	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 10:53	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: Within northern part of B1-2 drainage	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-25-2010	Backfill Time: 10:53

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
0 - 0.4	s			0.4		0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 4/3), medium dense, moist, weak cementation, mica present [Native]		10	30	50	10	
0.4 - 0.6	s					2									
0.6 - 0.8	s			0.0		4			becomes dark yellowish brown (10YR 4/4), pervasive iron oxidation						
0.8 - 1.0	s					6									
1.0 - 1.2	s			75		8			becomes dark greenish gray (GLE Y 1 4/1), distinct hydrocarbon odor						
1.2 - 1.4	s					10									
1.4 - 1.6	s					12		SC-SM	Silty, Clayey Sand, dark greenish gray (GLE Y 1 4/1), medium dense, moist, ~15% clay, ~10% silt, distinct hydrocarbon odor		10	30	35	25	
1.6 - 1.8	s			20		14			Total Depth = 12.5 ft; terminated prior to refusal on bedrock.						
1.8 - 2.0	s					16			Collected soil samples S001 at 08:47, S002 at 09:03, S003 at 09:51, and S004 at 10:44.						
2.0 - 2.2	s					18			Backfilled with soil cuttings.						
2.2 - 2.4	s					20									

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT_3/30/11



Boring ID: **B1BS0187**

Borehole Diam. (in.): 3	Total Depth (ft): 1.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269418.59	Easting (ft): 1796891.19	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 08:13	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 08:37	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	
Comments: On edge of slope west of B1-2 drainage; gravel and asphalt chunks		Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve		Soil Backfill Date: 05-25-2010	Backfill Time: 08:38

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			3.4		0		SP-SM	Poorly Graded Sand with Silt, dark brown (10YR 3/3), medium dense, moist, weak cementation, mica present [Fill]	10	15	30	35	10
						1			Total Depth = 1.5 ft; refusal on asphalt. Three step-out borings met similar refusal. Collected soil sample S001 at 08:16. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0188**

Borehole Diam. (in.): 3	Total Depth (ft): 0.8	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269217.29	Easting (ft): 1796768.53	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-24-2010	Start Time: 12:38	Logged By: A. Goldenberg	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-24-2010	Finish Time: 12:55	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Under oak tree, soil and oak leaves at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-24-2010	Backfill Time: 12:55

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand, brown (10YR 5/3), dense, dry to moist, subangular gravel, porous, contains roots and rootlets, no odor or staining [Native]	10	5	35	20	30
						1			Total Depth = 0.8 ft; refusal on Chatsworth Formation Sandstone. One step-out boring 0.5 ft to south met similar refusal. Collected soil sample S001 at 12:40. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT_3/30/11



Boring ID: **B1BS0189**

Borehole Diam. (in.): 3	Total Depth (ft): 4.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269192.80	Easting (ft): 1796800.03	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-26-2010	Start Time: 10:27	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-26-2010	Finish Time: 11:12	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On flat, sparsely vegetated surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-26-2010	Backfill Time: 11:12

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, brown (10YR 4/3), medium dense, dry, weak cementation [Fill]	tr	10	40	40	10	
						1									
						2			▼ small chunks of asphalt present in auger bucket						
						3			▼ no gravel or coarse sand present			40	50	10	
3.5 - 4.0	s			0.0		4			Total Depth = 4.0 ft; refusal on asphalt or concrete. Collected soil samples S001 at 10:28 and S002 at 10:47. Five step-out borings required to collect S002, which was collected from step-out 2 ft to southeast. All borings backfilled with soil cuttings.						
						5									
						6									
						7									
						8									
						9									
						10									

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0190**

Borehole Diam. (in.): 3	Total Depth (ft): 1.2	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269291.69	Easting (ft): 1796883.26	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 09:15	Logged By: A. Goldenberg	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 09:36	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: On edge of dirt road, surface covered with hydromulch	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-25-2010	Backfill Time: 09:40

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.6	s			0.6		0		SM	Silty Sand, brown (10YR 4/3), dense, dry to moist, few subangular gravel, few rootlets, no odor or staining [Fill]	5	5	30	25	35
						1			Total Depth = 1.2 ft; refusal on rocks, either fill or bedrock. One step-out boring 1 ft to northwest met similar refusal.					
						2			Collected soil sample S001 at 09:18.					
						2			Backfilled with soil cuttings.					
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0191**

Borehole Diam. (in.): 3	Total Depth (ft): 5.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269261.12	Easting (ft): 1796869.03	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 09:45	Logged By: A. Goldenberg	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 12:00	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Surface covered with gravel and hydromulch	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-25-2010	Backfill Time: 12:00

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			4.2		0		SM	Silty Sand, dark yellowish brown (10YR 4/4), dense, dry to moist, slightly clayey, no odor or staining [Fill]	5	5	25	25	40
2.5 - 3.0	s		681			2			▼ very strong odor					
4.0 - 4.5	s		1524			4			▼ becomes very dark greenish gray (GLEY 1 3/1), moist, slightly coarser sand, very strong odor and staining	5	10	30	20	40
5.0 - 5.0						5			Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 10:00, S002 at 10:09, and S003 at 10:30. Backfilled with soil cuttings.					
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0192**

Borehole Diam. (in.): 3	Total Depth (ft): 5.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269235.07	Easting (ft): 1796833.46	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 12:35	Logged By: A. Goldenberg	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 13:10	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Soil with aggregate base at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-25-2010	Backfill Time: 13:10

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s	0.5				0		SM	Silty Sand, mottled yellowish brown (10YR 5/6) and dark yellowish brown (10YR 4/4), dense, dry to moist, few gravel, no odor or staining [Fill]	10	5	30	20	35
3 - 5	s	0.1				3		SM	Silty Sand with Gravel, dark brown (10YR 3/3), dense, moist, angular to subrounded gravel [Fill]	20	5	20	25	30
Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 12:40 and S002 at 13:00. Backfilled with soil cuttings.														

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0193**

Borehole Diam. (in.): 3	Total Depth (ft): 10.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269233.17	Easting (ft): 1796746.63	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-24-2010	Start Time: 12:59	Logged By: A. Goldenberg	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-24-2010	Finish Time: 13:55	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Soil with vegetation at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-24-2010	Backfill Time: 14:00

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.3	S	0.3				0		SM	Silty Sand, brown (10YR 4/3), medium dense, moist, porous, contains roots and rootlets, no odor or staining [Fill]	5	10	35	30	20
0.3 - 4.1	S	0.1				2		SC	Clayey Sand, dark yellowish brown (10YR 3/4), medium dense, moist, organic-rich, contains roots, no odor or staining [Alluvium]		10	20	30	40
4.1 - 9.9	S	0.1				8			Sandstone, brownish yellow (10YR 6/6) and dark yellowish brown (10YR 4/4), moist, weathered, slightly friable, no odor or staining [Chatsworth Formation]					
9.9 - 10.0	S	0.1				10			▽ becomes less weathered, hard Total Depth = 10.0 ft; refusal on bedrock. One step-out boring 1 ft to southwest met similar refusal. Collected soil samples S001 at 13:10, S002 at 13:17, and S003 at 13:47. Backfilled with soil cuttings.					

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0194**

Borehole Diam. (in.): 3	Total Depth (ft): 3.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269239.89	Easting (ft): 1796797.35	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: 10:45	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 11:00	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments:	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 11:00

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, light yellowish brown (10YR 6/4), loose, dry, fine gravel, no odor or staining [Fill]	10	5	10	50	25
2.5 - 3.5	S					3			Sandstone [Chatsworth Formation] Total Depth = 3.5 ft; refusal on bedrock.					
						4			Collected soil samples S001 at 10:48 and S002 at 10:54. Backfilled with soil cuttings.					
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0195**

Borehole Diam. (in.): 3	Total Depth (ft): 4.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269199.50	Easting (ft): 1796781.63	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: 11:20	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 11:37	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Roots and oak leaves at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 11:37

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, yellowish brown (10YR 5/4), loose, dry, fine gravel, no odor or staining [Fill - Reworked Native Soil]	5		tr	65	30
4.0 - 4.5	S					4			Sandstone [Chatsworth Formation] Total Depth = 4.5 ft; refusal on bedrock. Collected soil samples S001 and D001 at 11:28 and S002 at 11:35. Backfilled with soil cuttings.					

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0196**

Borehole Diam. (in.): 3	Total Depth (ft): 1.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269184.09	Easting (ft): 1796832.68	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: 11:05	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 11:18	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments:	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 11:18

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
0 - 0.5	S					0		SM	Silty Sand, very pale brown (10YR 7/4), loose, dry, no odor or staining [Fill]	5		10	55	30	
						1									
						1.5			Sandstone [Chatsworth Formation] Total Depth = 1.5 ft; refusal on bedrock.						
						2			Collected soil sample S001 at 11:08. Collect duplicate sample at B1BS0195 due to hard drilling at this location.						
						3			Backfilled with soil cuttings.						
						4									
						5									
						6									
						7									
						8									
						9									
						10									

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0197**

Borehole Diam. (in.): 3	Total Depth (ft): 0.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269167.56	Easting (ft): 1796801.99	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: 12:57	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 13:10	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Shrubs and roots at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 13:10

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SW-SM	Well Graded Sand with Silt, yellowish brown (10YR 5/4), loose, dry, fine gravel, roots, no odor or staining [Fill - Reworked Native Soil]	5	10	45	30	10
						1			Sandstone [Chatsworth Formation] Total Depth = 0.5 ft; refusal on bedrock. Collected soil sample S001 at 13:02. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0198**

Borehole Diam. (in.): 3	Total Depth (ft): 0.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269307.78	Easting (ft): 1796969.01	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: 09:55	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 10:04	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Scattered vegetation at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 10:04

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, pale brown (10YR 6/3), loose, dry, fine gravel, roots, no odor or staining [Fill]	5		5	60	30
						1			Sandstone [Chatsworth Formation] Total Depth = 0.5 ft; refusal on bedrock. Collected soil sample S001 at 09:57. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0199**

Borehole Diam. (in.): 3	Total Depth (ft): 0.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269270.36	Easting (ft): 1796998.41	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: 10:08	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 10:12	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Surface covered with gravel and hydromulch	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 10:12

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, pale brown (10YR 6/3), loose, dry, fine gravel, no odor or staining [Fill]	5		5	60	30
						1			Sandstone [Chatsworth Formation] Total Depth = 0.5 ft; refusal on bedrock. Collected soil sample S001 at 10:11. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0200**

Borehole Diam. (in.): 3	Total Depth (ft): 0.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269215.87	Easting (ft): 1796960.82	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: 10:20	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 10:27	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Gravel at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 10:27

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, pale brown (10YR 6/3), loose, dry, fine gravel, no odor or staining [Fill]	10		10	50	30
						1			Sandstone [Chatsworth Formation] Total Depth = 0.5 ft; refusal on bedrock. Collected soil sample S001 at 10:25. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0201**

Borehole Diam. (in.): 3	Total Depth (ft): 3.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269397.47	Easting (ft): 1796941.44	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: NR	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 09:14	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Surface covered with hydromulch	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 09:14

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, very pale brown (10YR 7/4), dense, dry, fine gravel, no odor or staining [Fill]	10		10	60	20
1.5 - 2.0	S					2			becomes pale brown (10YR 6/3), decreasing gravel	5		15	60	20
3.0						3			Sandstone [Chatsworth Formation] Total Depth = 3.0 ft; refusal on bedrock. Met refusal on bedrock at similar depth at two step-out borings. Collected soil samples S001 at 08:44 and S002 at 08:55. Backfilled all three locations with soil cuttings.					
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0202**

Borehole Diam. (in.): 3	Total Depth (ft): 0.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269394.77	Easting (ft): 1796994.66	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: NR	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 09:47	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Asphalt, gravel road base, and hydromulch at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 09:47

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand with Gravel, light yellowish brown (10YR 6/4), loose, dry, fine gravel, no odor or staining [Fill]	15	10	20	40	15
						1			Sandstone, weathered [Chatsworth Formation] Total Depth = 0.5 ft; refusal on bedrock. Collected soil sample S001 at 09:44. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0203**

Borehole Diam. (in.): 3	Total Depth (ft): 0.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269357.46	Easting (ft): 1796960.95	Job Number: 1008208	Site: B1-2
Drill Start Date: 07-27-2010	Start Time: 09:18	Logged By: V. Vathanasin	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 07-27-2010	Finish Time: 09:37	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Asphalt, gravel road base, and hydromulch at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 07-27-2010	Backfill Time: 09:37

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SP-SM	Poorly Graded Sand with Silt, loose, dry, fine gravel, no odor or staining [Fill]	5		20	65	10
						1			Sandstone [Chatsworth Formation] Total Depth = 0.5 ft; refusal on bedrock. Collected soil sample S001 at 09:32. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0204**

Borehole Diam. (in.): 3	Total Depth (ft): 6.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269152.52	Easting (ft): 1796913.52	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 08:35	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 09:00	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: S. Fink	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0510	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 09:00

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						2		SM	Silty Sand, yellowish brown (10YR 5/6), loose, dry, micaceous [Alluvium]			10	70	20
				0.0		4								
				0.0		6								
						7			Total Depth = 6.5 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 08:41 and S002 at 08:52. Excavation backfilled 01-12-2011 - 01-31-2011.					
						8								
						9								
						10								

LOG OF BORING - OUTFALL009_ISRA-2010.GPJ BOEING.GDT 3/30/11



Boring ID: **B1BS0206**

Borehole Diam. (in.): 3	Total Depth (ft): 3.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269271.44	Easting (ft): 1796927.22	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 09:00	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 09:15	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Luna	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0536	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 09:15

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
				0.0		2		SM	Silty Sand, light yellowish brown (10YR 6/4), loose, dry, trace fine gravel, micaceous [Alluvium]	10	10	60	20	
						3			Total Depth = 3.0 ft; refusal on weathered bedrock. Collected soil sample S001 at 09:15. Excavation backfilled 01-12-2011 - 01-31-2011.					
						4								
						5								
						6								
						7								
						8								
						9								
						10								

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



Boring ID: **B1BS0207**

Borehole Diam. (in.): 3	Total Depth (ft): 6.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269204.21	Easting (ft): 1796861.55	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 09:25	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 09:40	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Luna	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0543	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 09:40

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						2		SM	Silty Sand, dark yellowish brown (10YR 4/4), loose, dry, micaceous [Alluvium]			10	70	20
				0.0		5								
				0.0		6								
						7			Total Depth = 6.5 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 09:30 and S002 at 09:35. Excavation backfilled 01-12-2011 - 01-31-2011.					
						8								
						9								
						10								

LOG OF BORING - OUTFALL009_ISRA-2010.GPJ BOEING.GDT 3/30/11



Boring ID: **B1BS0208**

Borehole Diam. (in.): 3	Total Depth (ft): 6.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269173.26	Easting (ft): 1796842.94	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 09:38	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 10:00	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Luna	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0545	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 10:00

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						1								
						2		SM	Silty Sand, dark brown (10YR 3/3), loose, moist, micaceous [Alluvium]		tr	10	70	20
						3								
				0.0		4								
						5			↙ becomes very dark greenish gray (GLEY 1 10Y 3/1), stained, no odor					
				0.5		6								
						7			Total Depth = 6.5 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 09:40 and S002 at 09:50. Excavation backfilled 01-12-2011 - 01-31-2011.					
						8								
						9								
						10								

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



Boring ID: **B1BS0209**

Borehole Diam. (in.): 3	Total Depth (ft): 6.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269147.97	Easting (ft): 1796828.59	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 10:15	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 10:35	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Luna	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0547	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 10:35

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						2		SM	Silty Sand, dark brown (10YR 3/3), loose, moist, micaceous [Alluvium]				80	20
						4			↙ becomes brown (7.5YR 4/4)					
						6			Total Depth = 6.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 10:20 and S002 at 10:30. Excavation backfilled 01-12-2011 - 01-31-2011.					
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ BOEING.GDT 3/30/11



Boring ID: **B1BS0210**

Borehole Diam. (in.): 3	Total Depth (ft): 6.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269213.16	Easting (ft): 1796803.79	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 09:55	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 10:20	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: S. Fink	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0562	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 10:20

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						2		SM	Silty Sand, dark yellowish brown (10YR 4/4), loose, moist, micaceous [Alluvium]			10	70	20
						4								
						6			Total Depth = 6.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 10:00 and S002 at 10:15. Excavation backfilled 01-12-2011 - 01-31-2011.					
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ BOEING.GDT 3/30/11



Boring ID: **B1BS0211**

Borehole Diam. (in.): 3	Total Depth (ft): 6.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269242.80	Easting (ft): 1796827.71	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 10:30	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 10:50	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: S. Fink	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0564	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 10:50

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						1								
						2		SM	Silty Sand, dark yellowish brown (10YR 3/4), loose, moist, trace clay, micaceous [Alluvium]			10	60	30
						3								
						4								
						5			becomes dark yellowish brown (10YR 4/6)					
						6								
						7			Total Depth = 6.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 10:35 and S002 at 10:45. Excavation backfilled 01-12-2011 - 01-31-2011.					
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ BOEING.GDT 3/30/11



Boring ID: **B1BS0212**

Borehole Diam. (in.): 3	Total Depth (ft): 6.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269316.29	Easting (ft): 1796885.28	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 09:15	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 09:30	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Luna	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0567	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 09:30

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						2		SM	Silty Sand, dark yellowish brown (10YR 4/4), loose, moist, trace fine sandstone gravel, micaceous [Alluvium]	tr	10	70	20	
				0.0		4								
				0.1		6								
						7			Total Depth = 6.5 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 09:20 and S002 at 09:25. Excavation backfilled 01-12-2011 - 01-31-2011.					
						8								
						9								
						10								

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



Boring ID: **B1BS0213**

Borehole Diam. (in.): 3	Total Depth (ft): 5.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269387.10	Easting (ft): 1796841.87	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 13:10	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 13:30	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Luna	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0573	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 13:35

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						2		SM	Silty Sand, dark yellowish brown (10YR 4/6), loose, moist, micaceous [Alluvium]		10	70	20	
	S			0.0		3								
	S			0.1		5			becomes yellowish brown (10YR 5/6)					
						6			Total Depth = 5.5 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 13:15 and S002 at 13:30. Excavation backfilled 01-12-2011 - 01-31-2011.					
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0214**

Borehole Diam. (in.): 3	Total Depth (ft): 5.7	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269326.30	Easting (ft): 1796841.10	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 13:40	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 14:45	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: S. Fink	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0582	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: 14:50

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						1								
						2		SM	Silty Sand, dark yellowish brown (10YR 4/4), loose, dry, trace fine gravel, micaceous [Alluvium]	tr	10	70	20	
						3								
						4								
				0.1		5								
				0.0		6			Total Depth = 5.7 ft; refusal on weathered bedrock. Collected soil samples S001 and duplicate D001 at 13:45 and S002 at 14:45. Excavation backfilled 01-12-2011 - 01-31-2011.					
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **B1BS0215**

Borehole Diam. (in.): 3	Total Depth (ft): 5.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269396.68	Easting (ft): 1796854.21	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: NR	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: NR	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Luna	

Comments: Bottom of ISRA-B1-2 excavation, collocate with B1ET0593	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-13-2010	Backfill Time: NR

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			[See Trench Log ISRA-B1-2 for lithology]					
						2		SM	Silty Sand, dark yellowish brown (10YR 4/4), loose, moist, micaceous [Alluvium]			10	70	20
	S			0.0		3								
	S			0.0		5								
						6			Total Depth = 5.5 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 14:00 and S002 at 14:20. Excavation backfilled 01-12-2011 - 01-31-2011.					
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT_3/30/11



Boring ID: **B1BS0216**

Borehole Diam. (in.): 4	Total Depth (ft): 2.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269124.05	Easting (ft): 1796815.48	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-22-2010	Start Time: 10:00	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-22-2010	Finish Time: 10:35	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: A. Vann	

Comments: Trench ISRA-B1-2 perimeter	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-22-2010	Backfill Time: 10:35

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, dark yellowish brown (10YR 4/6), medium dense, moist, trace clay, micaceous [Fill]			20	60	20
1.5 - 2.0	s			0.0		2			becomes dark yellowish brown (10YR 3/4)					
Total Depth = 2.5 ft; terminated prior to refusal on bedrock.														
Collected soil samples S001 at 10:09 and S002 at 10:32.														
Backfilled with soil cuttings.														

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0217**

Borehole Diam. (in.): 4	Total Depth (ft): 2.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269105.78	Easting (ft): 1796817.04	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-22-2010	Start Time: 11:20	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-22-2010	Finish Time: 11:45	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: A. Vann	

Comments: Trench ISRA-B1-2 perimeter	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-22-2010	Backfill Time: 11:45

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, brownish yellow (10YR 6/6), medium dense, moist, micaceous [Fill]			20	60	20
0.5 - 2.0	s			0.0		1			becomes dark yellowish brown (10YR 3/4)					
2.0 - 2.5	s			0.0		2								
Total Depth = 2.5 ft; terminated prior to refusal on bedrock.														
Collected soil samples S001 at 11:24 and S002 at 11:39.														
Backfilled with soil cuttings.														
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0217A**

Borehole Diam. (in.): 2	Total Depth (ft): 3.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269105.78	Easting (ft): 1796817.04	Job Number: 1008208	Site: B1-2
Drill Start Date: 11-15-2010	Start Time: NR	Logged By: N. Beaty	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 11-15-2010	Finish Time: 10:50	Drilling Contractor: Jacob & Hefner Assoc.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Grab (hand sampling)	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: J. Ortiz	

Comments: Trench ISRA-B1-2 sidewall location	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve / Encores	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	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand, dark yellowish brown (10YR 4/4), medium dense, moist		5	15	65	15
						3			Total Depth of Excavation = 3.0 ft. Collected soil sample S001 at 10:50 from excavation sidewall.					
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ BOEING.GDT 3/25/11



Boring ID: **B1BS0218**

Borehole Diam. (in.): 4	Total Depth (ft): 2.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269131.02	Easting (ft): 1796797.42	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-22-2010	Start Time: 09:26	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-22-2010	Finish Time: 10:00	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: A. Vann	

Comments: Trench ISRA-B1-2 perimeter	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-22-2010	Backfill Time: 10:00

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.0		0		SM	Silty Sand, dark brown (10YR 3/3), medium dense, moist, trace fine sandstone gravel, trace clay, micaceous [Fill]	tr		20	60	20
						1			becomes yellowish brown (10YR 5/6)					
0.1 - 2.5	s			0.1		2								
						3			Total Depth = 2.5 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 09:39 and S002 at 09:58. Backfilled with soil cuttings.					
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0219**

Borehole Diam. (in.): 4	Total Depth (ft): 2.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269118.45	Easting (ft): 1796785.16	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-22-2010	Start Time: 10:35	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-22-2010	Finish Time: 11:15	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: A. Vann	

Comments: Trench ISRA-B1-2 perimeter, asphalt at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 10-22-2010	Backfill Time: 11:15

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SM	Silty Sand, dark yellowish brown (10YR 3/4), medium dense, moist, trace clay, micaceous [Fill]			20	60	20
0.5 - 2.0	s			0.0		1			becomes dark yellowish brown (10YR 4/4), dry					
2.0 - 2.5						2								
Total Depth = 2.5 ft; terminated prior to refusal on bedrock.														
Collected soil samples S001 at 10:49 and S002 at 11:10.														
Backfilled with soil cuttings.														
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0219A**

Borehole Diam. (in.): 2	Total Depth (ft): 3.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269118.45	Easting (ft): 1796785.16	Job Number: 1008208	Site: B1-2
Drill Start Date: 11-15-2010	Start Time: NR	Logged By: N. Beaty	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 11-15-2010	Finish Time: 10:40	Drilling Contractor: Jacob & Hefner Assoc.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Grab (hand sampling)	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: J. Ortiz	

Comments: Trench ISRA-B1-2 sidewall location	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel sleeve / Encores	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	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SM	Silty Sand, dark yellowish brown (10YR 4/4), medium dense, moist, trace calcium carbonate grains		5	15	65	15
						3			Total Depth of Excavation = 3.0 ft. Collected soil sample S001 at 10:40 from excavation sidewall.					
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **B1BS0220**

Borehole Diam. (in.): 3	Total Depth (ft): 0.5	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269153.26	Easting (ft): 1796803.85	Job Number: 1008208	Site: B1-2
Drill Start Date: 10-13-2010	Start Time: 11:10	Logged By: S. Aichner	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 10-13-2010	Finish Time: 11:15	Drilling Contractor: MP Environmental Svcs.	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: S. Fine	

Comments: Trench ISRA-B1-2 sidewall location	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Sample retained in 6-inch stainless steel 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	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.1		0		SM	Silty Sand, dark yellowish brown (10YR 4/4), loose, dry, trace fine sandstone gravel, micaceous [Fill]	tr	tr	10	70	20
						1			Sandstone, weathered [Chatsworth Formation] Total Depth = 0.5 ft; refusal on bedrock. Collected soil sample S001 at 11:15.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/25/11



Boring ID: **ENBS0045A**

Borehole Diam. (in.): 3	Total Depth (ft): 5.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269347.15	Easting (ft): 1797016.87	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-24-2010	Start Time: 12:53	Logged By: A. Ruotolo	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-24-2010	Finish Time: 13:25	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On edge of old road, surface covered with weathered hydromulch	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-24-2010	Backfill Time: 13:39

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.0		0		SP-SM	Poorly Graded Sand with Silt, dark yellowish brown (10YR 4/4), dense, moist, weak cementation, mica present [Native]	tr	10	30	50	10
4.5 - 5.0	S			0.0		5			Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 and duplicate D001 at 12:56 and S002 at 13:21. Backfilled with soil cuttings.					
						1								
						2								
						3								
						4								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **ENBS0046A**

Borehole Diam. (in.): 3	Total Depth (ft): 5.0	Project: ISRA Data Gap Sampling 2010, Outfall 009, Boeing Property	
Northing (ft): 269220.20	Easting (ft): 1796898.12	Job Number: 1008208	Site: B1-2
Drill Start Date: 05-25-2010	Start Time: 13:15	Logged By: A. Goldenberg	Reviewed By: M. Milman-Barris, P.G.
Drill Finish Date: 05-25-2010	Finish Time: 13:35	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Soil with brush at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Samples retained in 6-inch stainless steel sleeve	Soil Backfill Date: 05-25-2010	Backfill Time: 13:38

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			1.1		0		SM	Silty Sand with Gravel, dark brown (10YR 3/3), dense, dry to moist, angular to subrounded gravel, no odor or staining [Fill]	20	5	25	15	35
4.5 - 5.0	s			1.8		5								
Total Depth = 5.0 ft; terminated prior to refusal on bedrock. Collected soil samples S001 at 13:27 and S002 at 13:35. Backfilled with soil cuttings.														

LOG OF BORING: OUTFALL009_ISRA-2010.GPJ_BOEING.GDT 3/30/11



Boring ID: **ENBS0084**

Borehole Diam. (in.): 2	Total Depth (ft): 0.5	Project: SSFL ISRA Sampling - Outfall 009 Area	
Northing (ft): 267999.50	Easting (ft): 1794176.62	Job Number: 1891614	Site: Up-drainage of Culvert CM6
Drill Start Date: 06-02-2009	Start Time: 10:14	Logged By: B. Martasin, P.G. #8356	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 06-02-2009	Finish Time: 10:17	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Drive Sample/Grab	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Sample location in bare soil surrounded by vegetation	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Soil collected in 6-inch stainless steel sleeve	Soil Backfill Date: 06-02-2009	Backfill Time: 10:20

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, light brown (7.5YR 6/3), loose, dry, rootlets [Alluvium]	10	10	15	40	25
						1			Total Depth = 0.5 ft; terminated prior to refusal. Collected soil sample S001 at 10:17. Backfilled with native soil.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

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



Boring ID: **ENBS0094**

Borehole Diam. (in.): 6	Total Depth (ft): 0.5	Project: SSFL ISRA Sampling - Outfall 008 Area	
Northing (ft): 268019.54	Easting (ft): 1794180.50	Job Number: 1891614	Site: PEA-A1LF-2 South of Area 1 Road
Drill Start Date: 07-14-2009	Start Time: 11:22	Logged By: M. Milman-Barris	Reviewed By: S. Valenzuela, P.G.
Drill Finish Date: 07-14-2009	Finish Time: 11:23	Drilling Contractor: B.L. Hall	Field Instrumentation: 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: Mike Hoehn	
Comments: Dry soil, dry grass, and fragments of charred vegetation at surface		Well Comp. Date: N/A	Completion Time: N/A
Samplers: Hand trowel (soil placed in stainless steel sleeve)		Soil Backfill Date: 07-14-2009	Backfill Time: 11:23

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SP	Poorly Graded Sand, dark yellowish brown (10YR 4/4), loose, dry, no cementation, few rootlets [Alluvium]		5	5	90	
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 at 11:23. Backfilled with native soil.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

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



Boring ID: **ENBS0094A**

Borehole Diam. (in.): 3	Total Depth (ft): 3.8	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794191.13	Easting (ft): 268010.74	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-04-2010	Start Time: 08:25	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-04-2010	Finish Time: 08:35	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On flat, sparsely vegetated surface near boulder with charred surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-04-2010	Backfill Time: 08:40

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
				0.1		0		SP	Poorly Graded Sand, black (10YR 2/1), medium dense, moist, contains roots and rootlets [Native]	tr	10	45	40	5
				0.0		1			↙ becomes brown (10YR 4/3)					
						4			Sandstone, brownish yellow (10YR 6/8), weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 3.8 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 08:35. Backfilled with soil cuttings.					

LOG OF BORING - OUTFALL009.GPJ - BOEING.GDT 2/25/10



Boring ID: **ENBS0095**

Borehole Diam. (in.): 6	Total Depth (ft): 0.5	Project: SSFL ISRA Sampling - Outfall 008 Area	
Northing (ft): 268012.91	Easting (ft): 1794195.36	Job Number: 1891614	Site: PEA-A1LF-2 South of Area 1 Road
Drill Start Date: 07-14-2009	Start Time: 11:29	Logged By: M. Milman-Barris	Reviewed By: S. Valenzuela, P.G.
Drill Finish Date: 07-14-2009	Finish Time: 11:30	Drilling Contractor: B.L. Hall	Field Instrumentation: 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: Mike Hoehn	

Comments: Loose, dry soil and dry grass at surface, no debris	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Hand trowel (soil placed in stainless steel sleeve)	Soil Backfill Date: 07-14-2009	Backfill Time: 11:30

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SP	Poorly Graded Sand, dark yellowish brown (10YR 4/4), loose, dry, no cementation, few rootlets [Alluvium]			10	90	
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 at 11:30. Backfilled with native soil.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

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



Boring ID: **ENBS0096**

Borehole Diam. (in.): 6	Total Depth (ft): 0.5	Project: SSFL ISRA Sampling - Outfall 008 Area	
Northing (ft): 267995.78	Easting (ft): 1794198.21	Job Number: 1891614	Site: PEA-A1LF-2 South of Area 1 Road
Drill Start Date: 07-14-2009	Start Time: 11:37	Logged By: M. Milman-Barris	Reviewed By: S. Valenzuela, P.G.
Drill Finish Date: 07-14-2009	Finish Time: 11:38	Drilling Contractor: B.L. Hall	Field Instrumentation: 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: Mike Hoehn	
Comments: Dry soil and dry grass at surface, no debris		Well Comp. Date: N/A	Completion Time: N/A
Samplers: Hand trowel (soil placed in stainless steel sleeve)		Soil Backfill Date: 07-14-2009	Backfill Time: 11:38

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SP	Poorly Graded Sand, dark yellowish brown (10YR 4/4), loose, dry, no cementation, few rootlets [Alluvium]		5	20	75	
						1			Total Depth = 0.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 at 11:38. Backfilled with native soil.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

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



Boring ID: **ENBS0096A**

Borehole Diam. (in.): 3	Total Depth (ft): 4.5	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794201.59	Easting (ft): 267993.03	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-03-2010	Start Time: 13:13	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-03-2010	Finish Time: 13:22	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On very grassy slope	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-03-2010	Backfill Time: 13:27

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
						0		SP	Poorly Graded Sand, very dark grayish brown (10YR 3/2), medium dense, moist, contains rootlets, mica [Native]	tr	10	45	40	5	
				0.5		1									
						2									
						3									
						4			↙ becomes dark yellowish brown (10YR 4/4)						
				0.1		4.5			Sandstone, brownish yellow (10YR 6/8), weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 4.5 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 13:22. Backfilled with soil cuttings.						
						5									
						6									
						7									
						8									
						9									
						10									

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 2/25/10



Boring ID: **ENBS0148**

Borehole Diam. (in.): 3	Total Depth (ft): 2.0	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794191.53	Easting (ft): 268029.96	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-04-2010	Start Time: 08:49	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-04-2010	Finish Time: 09:03	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	
Comments: On flat surface sparsely covered with grass, near partially charred rock		Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve		Soil Backfill Date: 02-04-2010	Backfill Time: 09:05

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP	Poorly Graded Sand, dark yellowish brown (10YR 3/4), medium dense, moist, mica present [Native]	tr	10	45	40	5
						1			becomes brown (10YR 5/3)					
						2			Sandstone, brownish yellow (10YR 6/6), moderately weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 2.0 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 08:51. Backfilled with soil cuttings.					
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 2/25/10



Boring ID: **ENBS0149**

Borehole Diam. (in.): 3	Total Depth (ft): 4.5	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794188.64	Easting (ft): 268050.86	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-04-2010	Start Time: 09:13	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-04-2010	Finish Time: 09:27	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	
Comments: In small clearing between small bushes and adjacent to large boulder		Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve		Soil Backfill Date: 02-04-2010	Backfill Time: 09:37

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
0 - 0.5	S					0		SP	Poorly Graded Sand, dark yellowish brown (10YR 4/4), medium dense, moist, trace gravel-size sandstone fragments, contains rootlets, mica [Native]	tr	10	45	40	5	
						1									
						2									
						3			becomes yellowish brown (10YR 5/4)						
						4									
4.5 - 4.5	S					4.5			Sandstone, brownish yellow (10YR 6/6), moderately weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 4.5 ft; terminated due to refusal on bedrock. Collected soil samples S001 at 09:15 and S002 at 09:33. Backfilled with soil cuttings.						
						5									
						6									
						7									
						8									
						9									
						10									

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 2/25/10



Boring ID: **ENBS0150**

Borehole Diam. (in.): 3	Total Depth (ft): 4.8	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794212.31	Easting (ft): 268004.59	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-03-2010	Start Time: 11:17	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-03-2010	Finish Time: 11:38	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On moderate slope, in small clearing surrounded by grass and shrubs	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-03-2010	Backfill Time: 11:40

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, very dark gray (10YR 3/1), medium dense, moist, contains rootlets, mica [Native]		10	40	40	10
0.5 - 4.8	s					1			↙ becomes dark yellowish brown (10YR 4/4)					
						5			Sandstone, brownish yellow (10YR 6/8), weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 4.8 ft; terminated due to refusal on bedrock. Collected soil samples S001 at 11:18 and S002 at 11:34. Backfilled with soil cuttings.					

LOG OF BORING - OUTFALL009.GPJ - BOEING.GDT - 2/25/10



Boring ID: **ENBS0151**

Borehole Diam. (in.): 3	Total Depth (ft): 1.5	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794217.54	Easting (ft): 268013.12	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-04-2010	Start Time: 09:46	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-04-2010	Finish Time: 09:54	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On slight slope, moderately grassy surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-04-2010	Backfill Time: 09:58

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SP	Poorly Graded Sand, very dark brown (10YR 2/2), medium dense, moist, fine gravel consisting of sandstone fragments, contains rootlets, mica [Native]	10	10	40	35	5
						2			Sandstone, yellow (10YR 7/6), moderately weathered, slightly friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 1.5 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 09:48. Backfilled with soil cuttings.					

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Boring ID: **ENBS0152**

Borehole Diam. (in.): 3	Total Depth (ft): 1.0	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794218.97	Easting (ft): 267997.60	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-04-2010	Start Time: 10:16	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-04-2010	Finish Time: 10:19	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: Surface covered with fresh grass	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-04-2010	Backfill Time: 10:20

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP	Poorly Graded Sand, very dark grayish brown (10YR 3/2), medium dense, moist, fine gravel consisting of sandstone fragments, contains rootlets [Native]	10	10	40	35	5
0.5 - 1.0						1			Sandstone, yellow (10YR 7/6), moderately weathered, slightly friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 1.0 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 10:17. Backfilled with soil cuttings.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 2/25/10



Boring ID: **ENBS0153**

Borehole Diam. (in.): 3	Total Depth (ft): 3.5	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794206.92	Easting (ft): 267977.32	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-03-2010	Start Time: 14:03	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-03-2010	Finish Time: 14:20	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: In small clearing covered with dried vegetation and charred wood	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-03-2010	Backfill Time: 14:24

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.1	s			0.1		0		SP	Poorly Graded Sand, brown (10YR 4/3), medium dense, moist, contains rootlets and wood fragments, mica [Native]		10	45	40	5
0.1 - 3.5	s					1 2 3			<p>becomes dark yellowish brown (10YR 4/6)</p> <p>Sandstone, brownish yellow (10YR 6/8), weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation]</p> <p>Total Depth = 3.5 ft; terminated due to refusal on bedrock.</p> <p>Collected soil samples S001 at 14:04 and S002 at 14:20.</p> <p>Backfilled with soil cuttings.</p>					

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Boring ID: **ENBS0154**

Borehole Diam. (in.): 3	Total Depth (ft): 1.6	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794220.19	Easting (ft): 267965.61	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-04-2010	Start Time: 10:36	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-04-2010	Finish Time: 10:41	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On slope covered with fresh vegetation	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-04-2010	Backfill Time: 10:43

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP-SM	Poorly Graded Sand with Silt, very dark grayish brown (10YR 3/2), medium dense, moist, gravel consists of sandstone fragments, contains roots and rootlets [Native]	5	10	35	40	10
						2			Sandstone, yellowish brown (10YR 5/6), weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 1.6 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 10:37. Backfilled with soil cuttings.					

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Boring ID: **ENBS0155**

Borehole Diam. (in.): 3	Total Depth (ft): 3.5	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794191.54	Easting (ft): 267990.77	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-03-2010	Start Time: 13:35	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-03-2010	Finish Time: 13:49	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: On slope sparsely covered with fresh grass	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-03-2010	Backfill Time: 13:53

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
0 - 0.2	s			0.2		0		SP	Poorly Graded Sand, very dark grayish brown (10YR 3/2), medium dense, moist, contains roots and rootlets, mica [Native]		10	45	40	5	
						1			↙ becomes dark yellowish brown (10YR 4/4)						
						2									
						3			↙ becomes yellowish brown (10YR 5/6), with few gravel		10	5	40	40	5
						4			Sandstone, brownish yellow (10YR 6/8), weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 3.5 ft; terminated due to refusal on bedrock. Collected soil samples S001 at 13:37 and S002 at 13:49. Backfilled with soil cuttings.						
						5									
						6									
						7									
						8									
						9									
						10									

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 2/25/10



Boring ID: **ENBS0156**

Borehole Diam. (in.): 3	Total Depth (ft): 4.5	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1794175.61	Easting (ft): 267982.26	Job Number: 1008208	Site: A1LF-2 (NW of Debris Area)
Drill Start Date: 02-04-2010	Start Time: 11:09	Logged By: A. Ruotolo	Reviewed By: V. Vathanasin, P.G.
Drill Finish Date: 02-04-2010	Finish Time: 11:24	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: R. Cano	

Comments: In small clearing surrounded by dense brush between large boulders	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-04-2010	Backfill Time: 11:24

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	s			0.0		0		SP	Poorly Graded Sand, very dark gray (10YR 3/1), medium dense, moist, trace gravel-size sandstone fragments, contains rootlets [Native]	tr	10	45	40	5
0.5 - 4.5	s					1			becomes yellowish brown (10YR 5/4)					
4.5 - 4.5						4.5			Sandstone, yellowish brown (10YR 5/6), weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 4.5 ft; terminated due to refusal on bedrock. Collected soil samples S001 at 11:10 and S002 at 11:24. Backfilled with soil cuttings.					

LOG OF BORING - OUTFALL009.GPJ BOEING.GDT 2/25/10



Boring ID: **ILBS0118A**

Borehole Diam. (in.): 2-1/4	Total Depth (ft): 5.5	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1795957.51	Easting (ft): 268281.42	Job Number: 1008208	Site: IEL (North - Grass)
Drill Start Date: 01-28-2010	Start Time: 10:15	Logged By: S. Aichner	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 01-28-2010	Finish Time: 10:50	Drilling Contractor: Strongarm	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Geoprobe/Direct Push	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: Eric / Walter	

Comments: Weeds at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Macrocore, discrete sample retained in 6-inch stainless steel sleeve	Soil Backfill Date: 01-28-2010	Backfill Time: 11:00

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
				0.4		0		SM	Silty Sand, dark brown (10YR 3/3), medium dense, moist, trace clay, micaceous [Native]				70	30
						1								
						2								
						3								
						4			becomes yellowish brown (10YR 5/4), no clay					
				0.7		5								
						6			Total Depth = 5.5 ft; terminated prior to refusal on bedrock. Collected soil sample S001 at 10:50. Backfilled with soil cuttings topped off with hydrated bentonite.					
						7								
						8								
						9								
						10								

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



Boring ID: **ILBS0139A**

Borehole Diam. (in.): 3	Total Depth (ft): 0.8	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1795980.41	Easting (ft): 268404.02	Job Number: 1008208	Site: IEL (North - Building Corner)
Drill Start Date: 02-08-2010	Start Time: 09:56	Logged By: A. Ruotolo	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 02-08-2010	Finish Time: 09:58	Drilling Contractor: B.L. Hall	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Asphalt pavement at surface, cored prior to hand augering	Well Comp. Date: N/A	Completion Time: N/A
Samplers: No sample collected	Soil Backfill Date: 02-08-2010	Backfill Time: 10:03

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			Asphalt (cored)					
						0.8		SP-SM	Poorly Graded Sand with Silt, yellowish brown (10YR 5/4), medium dense, moist, mica present; possibly weathered sandstone [Native] Sandstone, yellow (10YR 7/6), highly weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 0.8 ft; terminated due to refusal on bedrock. No soil sample collected. Backfilled with soil cuttings and sealed with cold patch.		tr	50	40	10

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



Boring ID: **ILBS0180A**

Borehole Diam. (in.): 3	Total Depth (ft): 0.9	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1795992.41	Easting (ft): 268420.77	Job Number: 1008208	Site: IEL (North - Building Corner)
Drill Start Date: 02-08-2010	Start Time: 09:45	Logged By: A. Ruotolo	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 02-08-2010	Finish Time: 09:48	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Concrete at surface, cored prior to hand augering	Well Comp. Date: N/A	Completion Time: N/A
Samplers: No sample collected	Soil Backfill Date: 02-08-2010	Backfill Time: 09:50

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil					
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay	
						0			Concrete (cored)						
				0.2		0.9		SM	Silty Sand, dark yellowish brown (10YR 4/4), medium dense, moist, mica present; possibly weathered sandstone [Native]			40	40	20	
						1			Sandstone, yellow (10YR 7/6), highly weathered, moderately friable, contains quartz, feldspar, and mica [Chatsworth Formation] Total Depth = 0.9 ft; terminated due to refusal on bedrock.						
						2			No soil sample collected.						
						2			Backfilled with soil cuttings and sealed with cold patch.						
						3									
						4									
						5									
						6									
						7									
						8									
						9									
						10									

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



Boring ID: **ILBS0249**

Borehole Diam. (in.): 3	Total Depth (ft): 5.0	Project: SSFL ISRA Sampling - Outfall 009 Area	
Northing (ft): 268400.36	Easting (ft): 1796007.77	Job Number: 1891614	Site: IEL
Drill Start Date: 06-03-2009	Start Time: 12:55	Logged By: B. Martasin, P.G. #8356	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 06-03-2009	Finish Time: 13:05	Drilling Contractor: Strongarm	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: K. Rigney	

Comments: Asphalt pavement at sample location	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Slide hammer with stainless steel sleeve	Soil Backfill Date: 06-03-2009	Backfill Time: 13:10

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			Asphalt 4 inches thick over 2 inches road base					
	S					0.2		SM	Silty Sand with Gravel, brown (10YR 4/3), medium dense, moist, angular granitic gravel up to 1/2 inch diameter [Fill]	15	15	20	20	30
	S					4.5								
						6			Total Depth = 5.0 ft; terminated prior to refusal. Collected soil samples S001 at 13:00 and S002 at 13:05. Backfilled with auger cuttings.					
						8								
						10								
						12								
						14								
						16								
						18								
						20								

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



Boring ID: **ILBS0250**

Borehole Diam. (in.): 3	Total Depth (ft): 1.5	Project: SSFL ISRA Sampling - Outfall 009 Area	
Northing (ft): 268373.80	Easting (ft): 1796059.89	Job Number: 1891614	Site: IEL
Drill Start Date: 06-03-2009	Start Time: 12:35	Logged By: B. Martasin, P.G. #8356	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 06-03-2009	Finish Time: 12:45	Drilling Contractor: Strongarm	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: K. Rigney	

Comments: Asphalt pavement at sample location	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Slide hammer with stainless steel sleeve	Soil Backfill Date: 06-03-2009	Backfill Time: 12:50

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			Asphalt 4 inches thick over 2 inches road base					
	s					0		SM	Silty Sand, brownish yellow (10YR 6/8), medium dense, iron oxide staining [Alluvium]					
						2			Total Depth = 1.5 ft; refusal on weathered Chatsworth Formation Sandstone. Collected soil sample S001 at 12:45. Backfilled with auger cuttings.					
						4								
						6								
						8								
						10								
						12								
						14								
						16								
						18								
						20								

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



Boring ID: **ILBS0251**

Borehole Diam. (in.): 3	Total Depth (ft): 5.0	Project: SSFL ISRA Sampling - Outfall 009 Area	
Northing (ft): 268304.70	Easting (ft): 1796019.68	Job Number: 1891614	Site: IEL
Drill Start Date: 06-03-2009	Start Time: 12:15	Logged By: B. Martasin, P.G. #8356	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 06-03-2009	Finish Time: 12:30	Drilling Contractor: Strongarm	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: K. Rigney	

Comments: Vegetation at surface	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Slide hammer with stainless steel sleeve	Soil Backfill Date: 06-03-2009	Backfill Time: 12:35

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
	S					0		SM	Silty Sand with Gravel, light brown (7.5YR 6/3), loose, dry, granitic gravel [Fill]	15	15	20	30	20
						2		SM	Silty Sand, brown (10YR 4/3), medium dense, moist [Alluvium]				60	40
	S					4			becomes brownish yellow (10YR 6/8) with iron oxide staining, micaceous, slightly coarser sand, decrease in fines, rootlets observed			10	70	20
						6			Total Depth = 5.0 ft; terminated prior to refusal. Collected soil samples S001 at 12:20 and S002 at 12:30. Backfilled with auger cuttings.					
						8								
						10								
						12								
						14								
						16								
						18								
						20								

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



Boring ID: **ILBS0252**

Borehole Diam. (in.): 2	Total Depth (ft): 5.0	Project: SSFL ISRA Sampling - Outfall 009 Area	
Northing (ft): 268284.78	Easting (ft): 1795874.43	Job Number: 1891614	Site: IEL
Drill Start Date: 06-03-2009	Start Time: 11:10	Logged By: B. Martasin, P.G. #8356	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 06-03-2009	Finish Time: 11:18	Drilling Contractor: Strongarm	Field Instrumentation: N/A
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Geoprobe 5400/Direct Push	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: K. Rigney	

Comments:	Well Comp. Date: N/A	Completion Time: N/A
Samplers: Geoprobe macrocore with acetate sleeve	Soil Backfill Date: 06-03-2009	Backfill Time: 11:25

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S					0		SM	Silty Sand, dark brown (7.5YR 3/4), dense, moist [Fill]				60	40
0.5 - 3.5						2								
3.5 - 4.0	S					4		SM	Silty Sand, brownish yellow (10YR 6/8), hard, moist, micaceous, iron oxide staining [Weathered Chatsworth Formation Sandstone]	5	5	10	50	30
4.0 - 5.0						6			Total Depth = 5.0 ft; terminated prior to refusal. Collected soil samples S001 at 11:15 and S002 at 11:20. Backfilled with geoprobe cuttings.					
						8								
						10								
						12								
						14								
						16								
						18								
						20								

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



Boring ID: **ILBS0253**

Borehole Diam. (in.): 2	Total Depth (ft): 5.0	Project: SSFL ISRA Sampling - Outfall 009 Area	
Northing (ft): 268348.59	Easting (ft): 1795881.14	Job Number: 1891614	Site: IEL
Drill Start Date: 06-03-2009	Start Time: 10:52	Logged By: B. Martasin, P.G. #8356	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 06-03-2009	Finish Time: NR	Drilling Contractor: Strongarm	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Geoprobe 5400/Direct Push	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: K. Rigney	

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

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
0 - 0.5	S			0.0		0		SM	Silty Sand, brownish yellow (10YR 6/6), dense, moist, micaceous, iron oxide staining [Alluvium]			10	70	20
3.5 - 4.0	S			0.0		4								
Total Depth = 5.0 ft; terminated prior to refusal. Collected soil samples S001 at 10:55 and S002 at 11:00. Backfilled with geoprobe cuttings.														

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



Boring ID: **ILBS0306**

Borehole Diam. (in.): 3	Total Depth (ft): 2.0	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1796006.19	Easting (ft): 268402.95	Job Number: 1008208	Site: IEL (North - Building Corner)
Drill Start Date: 02-09-2010	Start Time: 09:10	Logged By: S. Aichner	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 02-09-2010	Finish Time: 09:40	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Asphalt pavement at surface, cored prior to augering	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-09-2010	Backfill Time: 09:50

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			Asphalt over gravel road base					
	s			1.2		1		SM	Silty Sand, dark yellowish brown (10YR 4/4), medium dense, moist, trace gravel-size sandstone fragments, micaceous [Native]	tr		10	50	40
						2			becomes yellowish brown (10YR 5/6) Sandstone, yellowish brown (10YR 5/6), weathered [Chatsworth Formation] Total Depth = 2.0 ft; terminated due to refusal on bedrock. Collected soil sample S001 at 09:30. Backfilled with soil cuttings and sealed with cold patch.					
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

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



Boring ID: **ILBS0307**

Borehole Diam. (in.): 3	Total Depth (ft): 0.9	Project: SSFL - ISRA Data Gap Sampling 2010 (Outfall 009 Area)	
Northing (ft): 1795969.66	Easting (ft): 268385.76	Job Number: 1008208	Site: IEL (North - Building Corner)
Drill Start Date: 02-08-2010	Start Time: 10:02	Logged By: A. Ruotolo	Reviewed By: B. Martasin, P.G. #8356
Drill Finish Date: 02-08-2010	Finish Time: 13:10	Drilling Contractor: B.L. Hall	Field Instrumentation: PID
Depth 1st H ₂ O (ft): N/A	Date / Time: N/A	Drill Rig Type/Method: Hand Auger	
Depth H ₂ O After Drilling (ft): N/A	Date / Time: N/A	Driller's Name: M. Hoehn	

Comments: Asphalt pavement at surface, cored prior to augering	Well Comp. Date: N/A	Completion Time: N/A
Samplers: 6-inch stainless steel sleeve	Soil Backfill Date: 02-08-2010	Backfill Time: 13:12

Sample Interval Retained	Sample Type	Recovery (%)	Blow Count/6"	PID (ppm)	Water Level	Depth (feet)	Graphic Log	USCS Soil Classification	Description	Est. % of Soil				
										Gravel	Coarse Sand	Med. Sand	Fine Sand	Silt/Clay
						0			Asphalt over 1 inch of gravel road base					
	S			0.1		0.5		SP-SM	Poorly Graded Sand with Silt, yellowish brown (10YR 5/4), medium dense, moist, mica present, possibly weathered sandstone [Native]		tr	50	40	10
						1			Sandstone, dark yellowish brown (10YR 4/6), weathered, moderately friable, contains quartz, feldspar, and mica, iron oxidation [Chatsworth Formation] Total Depth = 0.9 ft; terminated due to refusal on bedrock. Collected soil samples S001 and S001SP at 13:09. Backfilled with soil cuttings and sealed with cold patch.					
						2								
						3								
						4								
						5								
						6								
						7								
						8								
						9								
						10								

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