

ATTACHMENT 4: FIELD LOGS

This attachment contains the groundwater sample collection field logs for the relatively shallow standpipe monitoring wells (MW-5 through MW-8, MW-10, MW-13, MW-15, and MW-16), as well as the field data sheets for the Westbay™ multiport wells (MW-3, MW-4, MW-11, MW-12, MW-14, and MW-17 through MW-26). Groundwater sample collection for the 3rd Quarter 2017 sampling event was conducted by Blaine Tech Services, Inc.

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-3
 SAMPLING DATE(S): 07/26/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 177.40
 ATM. PRESSURE (PSI): (Start) 14.12 (Finish) 14.15

PROBE TYPE: Westbay
 SERIAL NO.: FMS2502
 PROJECT: JP Belli @ JPL
 OPERATOR(S): T. Hoang
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample				
			Shoe Out/ Close Valve/ Check Vacuum	Open Valve/ Apply Vacuum (5 psi)	Shoe In/ Arm In	Locate Port/ Arm Out/ Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve/ Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) mg/L	Sample Time	Sample ID		
4	1	✓	✓	✓	✓	✓	184.63	✓	194.09	✓	194.09	✓	184.63	23.3	565	8.31	41	7.01	0935	MW-3-4	OKP 218	
3	1	✓	✓	✓	✓	✓	92.22	✓	102.39	✓	102.39	✓	92.22	25.0	587	8.64	20	6.35	1015	MW-3-3	320	
	2	✓	✓	✓	✓	✓	92.23	✓	102.40	✓	102.40	✓	92.23									
2	1	✓	✓	✓	✓	✓	51.92	✓	62.33	✓	62.33	✓	51.92	22.4	553	8.43	6	6.09	1050	MW-3-2	265	

Comments: M/S/MCD @ MW-3-3

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-4
 SAMPLING DATE(S): 07/31/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 151.86
 ATM. PRESSURE (PSI): (Start) 14.11 (Finish) 14.13

PROBE TYPE: Westbay
 SERIAL NO.: EMS2502
 PROJECT: Borhi @ JPL
 OPERATOR(S): Ti Hoang
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample				
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	ORP (mV)	Sample Time	Sample ID	
3	1	✓	✓	✓	✓	✓	92.75	✓	101.59	✓	101.59	✓	92.75	18.9	1664	7.20	51	6.35	-80	0735	mw-4-3	
2	1	✓	✓	✓	✓	✓	56.92	✓	66.03	✓	66.03	✓	56.92	18.7	1181	7.54	16	7.01	221	0805	mw-4-2	
1	1	✓	✓	✓	✓	✓	17.59	✓	30.50	✓	30.50	✓	17.59	18.1	401	8.21	3	6.57	226	0830	mw-4-1	

Comments: _____

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-11
 SAMPLING DATE(S): 08/01/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 169.75
 ATM. PRESSURE (PSI): (Start) 1397 (Finish) 1403

PROBE TYPE: Westbay
 SERIAL NO.: FMS2502
 PROJECT: Borhi @ JPL
 OPERATOR(S): Ti Hoang
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar		Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample		
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) → mg/L	ORP (mV)	Sample Time	Sample ID
4	1	✓	✓	✓	✓	✓	171.15	✓	168.47	✓	168.47	✓	171.15	21.2	203	9.11	2	7.34	-7.5	1100	MW-11-4
3	1	✓	✓	✓	✓	✓	130.49	✓	125.12	✓	125.12	✓	130.49	22.3	566	7.35	1	6.88	206	1130	MW-11-3
2	1	✓	✓	✓	✓	✓	56.58	✓	54.53	✓	54.53	✓	56.58	22.5	458	8.25	1	6.75	-59	1150	MW-11-2
	2	✓	✓	✓	✓	✓	56.55	✓	54.51	✓	54.51	✓	56.55								
1	1	✓	✓	✓	✓	✓	14.10	✓	25.76	✓	25.76	✓	14.10	23.5	574	8.22	2	7.10	183	1250	MW-11-1
	2	✓	✓	✓	✓	✓	14.08	✓	25.74	✓	25.74	✓	14.08								

Comments: PUP-5-3017 @ MW-11-2 @ 1200
EB-7-080117 @ 1300

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-12
 SAMPLING DATE(S): 08/01/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 135.01
 ATM. PRESSURE (PSI): (Start) 14.04 (Finish) 14.08

PROBE TYPE: Westbay
 SERIAL NO.: EM52502
 PROJECT: Badini @ JPL
 OPERATOR(S): J. Hoang
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample			
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) mg/L	ORP (mV)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	199.01	✓	182.07	✓	182.07	✓	199.01	20.0	585	8.09	2	7.01	209	0730	MW-12-5
4	1	✓	✓	✓	✓	✓	149.14	✓	141.14	✓	141.14	✓	149.14	19.4	496	8.56	1	6.43	236	0800	MW-12-4
3	1	✓	✓	✓	✓	✓	101.97	✓	93.20	✓	93.20	✓	101.97	20.3	447	8.31	1	6.24	211	0815	MW-12-3
	2	✓	✓	✓	✓	✓	101.93	✓	93.18	✓	93.18	✓	101.93								
2	1	✓	✓	✓	✓	✓	66.16	✓	59.33	✓	59.33	✓	66.16	19.7	501	8.26	2	6.39	219	0915	MW-12-2
1	1	✓	✓	✓	✓	✓	21.15	✓	20.11	✓	20.11	✓	21.15	19.2	541	8.20	2	6.25	215	0945	MW-12-1
	2	✓	✓	✓	✓	✓	21.13	✓	20.09	✓	20.09	✓	21.13								

Comments: PUP-4-2017 @ MW-12-3 @ 0825
IB-7-080117 @ 0700

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-14
 SAMPLING DATE(S): 07/25/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 192.65
 ATM. PRESSURE (PSI): (Start) 14.04 (Finish) 14.13

PROBE TYPE: Westbay
 SERIAL NO.: EMF2502
 PROJECT: JPL
 OPERATOR(S): T. Hoang
 WEATHER: clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters				Sample				
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Sample Time	Sample ID	
5	1	✓	✓	✓	✓	✓	170.27	✓	160.95	✓	160.95	✓	170.27	20.9	322	7.48	2	6.01	0730	MW-14-5	236
4	1	✓	✓	✓	✓	✓	132.45	✓	124.73	✓	124.73	✓	132.45	20.8	665	7.87	1	6.43	0750	MW-14-4	191
3	1	✓	✓	✓	✓	✓	101.49	✓	92.70	✓	92.70	✓	101.49	21.1	1089	7.87	1	6.73	0815	MW-14-3	310
	2	✓	✓	✓	✓	✓	101.44	✓	92.69	✓	92.69	✓	101.44								
2	1	✓	✓	✓	✓	✓	55.53	✓	47.30	✓	47.30	✓	55.53	21.0	1195	8.04	1	7.05	0900	MW-14-2	330
1	1	✓	✓	✓	✓	✓	24.93	✓	17.30	✓	17.30	✓	24.93	20.3	1185	7.97	2	6.34	0930	MW-14-1	324
	2	✓	✓	✓	✓	✓	22.37	✓	17.27	✓	17.27	✓	22.37								

Comments: pup-2-3Q17 @ MW-14-3 @ 0825

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-17
 SAMPLING DATE(S): 07/26/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 208.15
 ATM. PRESSURE (PSI): (Start) 14.07 (Finish) 14.11

PROBE TYPE: Westbay
 SERIAL NO.: EM5 2502
 PROJECT: Bafki @ JPL
 OPERATOR(S): T. Hoang
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)					Sample Collection Checks (probe at sampling port in MP casing)					Field Parameters					Sample				
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	Sample Time	Sample ID		
4	1	✓	✓	✓	✓	✓	178.74	✓	155.42	✓	155.42	✓	178.74	20.3	621	7.29	1	6.11	0735	MW-17-4	249	
3	1	✓	✓	✓	✓	✓	129.28	✓	112.38	✓	112.38	✓	129.28	19.9	828	7.53	2	6.55	0805	MW-17-3	323	
2	1	✓	✓	✓	✓	✓	86.69	✓	72.71	✓	72.71	✓	86.69	20.3	669	7.65	1	6.27	0835	MW-17-2	315	

Comments: _____

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-18
 SAMPLING DATE(S): 07/26/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 294.30
 ATM. PRESSURE (PSI): (Start) 14.10 (Finish) 14.12

PROBE TYPE: Westbay
 SERIAL NO.: FMS 2502
 PROJECT: EP Bathi @ JPL
 OPERATOR(S): J. Huang
 WEATHER: clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample				
		Arm out/ Land Probe	Shoe Out/ Close Valve/ Check Vacuum	Open Valve/ Apply Vacuum (5 psi)	Close Valve/ Shoe In/ Arm In	Locate Port/ Arm Out/ Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve/ Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) mg/L	Sample Time	Sample ID		
5	1	✓	✓	✓	✓	✓	188.40	✓	185.47	✓	185.47	✓	188.40	24.4	306	9.02	4	7.31	1230	MW-18-5	ORP 282	
4	1	✓	✓	✓	✓	✓	136.16	✓	135.40	✓	135.40	✓	136.16	24.1	402	9.31	2	6.85	1310	MW-18-4	288	
3	1	✓	✓	✓	✓	✓	75.09	✓	80.55	✓	80.55	✓	75.09	23.6	529	8.41	2	6.54	1335	MW-18-3	292	
2	1	✓	✓	✓	✓	✓	34.15	✓	41.38	✓	41.38	✓	34.15	23.0	515	8.79	1	6.31	1400	MW-18-2	305	

Comments: EB-3-072617 ③ 1415

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-19
 SAMPLING DATE(S) 07/24/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 138.14
 ATM. PRESSURE (PSI): (Start) 1412 (Finish) 1414

PROBE TYPE Westbay
 SERIAL NO. E1MS 2502
 PROJECT: Bodhi @ JPL
 OPERATOR(S) T. Hoang
 WEATHER Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)					Field Parameters					Sample			
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	172.08	✓	149.24	✓	149.24	✓	172.08	20.2	575	8.65	2	7.03	1145	MW-19-5
4	1	✓	✓	✓	✓	✓	148.07	✓	120.91	✓	120.91	✓	148.07	20.3	643	8.47	1	6.71	1200	MW-19-4
3	1	✓	✓	✓	✓	✓	125.69	✓	103.09	✓	103.09	✓	125.69	19.8	760	8.35	1	6.43	1235	MW-19-3
2	1	✓	✓	✓	✓	✓	91.83	✓	69.34	✓	69.34	✓	91.83	20.2	1129	8.27	9	6.33	1250	MW-19-2
1	1	✓	✓	✓	✓	✓	60.47	✓	39.37	✓	39.37	✓	60.47	20.6	719	8.65	3	5.91	1315	MW-19-1

Comments: SB-1-072417 @ 1325
E13-1-072417 @ 1330

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-20
 SAMPLING DATE(S): 07/24/17
 LOCATION: JPL - Church Parking Lot
 WATER LEVEL INSIDE CASING: 241.17
 ATM. PRESSURE (PSI): (Start) 1108 (Finish) 1710

PROBE TYPE: Westbay
 SERIAL NO.: FMS 2502
 PROJECT: Poshi @ JPL
 OPERATOR(S): I. Hoang
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)					Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample		
		Arm out/ Land Probe	Shoe Out/ Close Valve/ Check Vacuum	Open Valve/ Apply Vacuum (5 psi)	Close Valve/ Shoe In/ Arm In	Locate Port/ Arm Out/ Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve/ Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) <i>ms/L</i>	Sample Time	Sample ID	
5	1	✓	✓	✓	✓	✓	305.95	✓	310.57	✓	310.57	✓	305.95	19.5	410	7.40	2	7.31	0745	MW-20-5	01
4	1	✓	✓	✓	✓	✓	218.67	✓	217.29	✓	217.29	✓	218.67	20.6	326	8.44	2	6.71	0815	MW-20-4	-1
3	1	✓	✓	✓	✓	✓	159.07	✓	154.03	✓	154.03	✓	159.07	19.8	357	8.31	1	5.91	0845	MW-20-3	-
	2	✓	✓	✓	✓	✓	159.05	✓	154.04	✓	154.04	✓	159.05								
2	1	✓	✓	✓	✓	✓	84.96	✓	85.83	✓	85.83	✓	84.96	20.3	626	8.36	1	6.45	0935	MW-20-2	1:
1	1	✓	✓	✓	✓	✓	141.18	✓	14.84	✓	14.84	✓	14.18	19.4	574	8.21	2	7.10	1000	MW-20-1	1
	2	✓	✓	✓	✓	✓	141.18	✓	14.80	✓	14.80	✓	14.18								

Comments: TB-1-072417 @ 0700
DUP-1-3017 @ MW-20-3 @ 0855

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: WA MW-21
 SAMPLING DATE(S): 07/31/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 117.31
 ATM. PRESSURE (PSI): (Start) 14.12 (Finish) 14.14

PROBE TYPE: Westbay
 SERIAL NO.: FMS2502
 PROJECT: Bochi @ JPL
 OPERATOR(S): T. Hoare
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar		Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)			Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample			
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) mg/L	ORP (mV)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	129.11	✓	136.56	✓	136.56	✓	129.11	21.6	804	8.04	3	6.15	233	1015	MW-21-5
	2	✓	✓	✓	✓	✓	129.05	✓	136.54	✓	136.54	✓	129.05								
4	1	✓	✓	✓	✓	✓	103.14	✓	109.74	✓	109.74	✓	103.14	21.4	910	8.31	2	6.11	269	0945	MW-21-4
3	1	✓	✓	✓	✓	✓	72.94	✓	79.92	✓	79.92	✓	72.94	25.0	1212	8.01	1	5.85	280	1050	MW-21-3
	2	✓	✓	✓	✓	✓	72.90	✓	79.88	✓	79.88	✓	72.90								
2	1	✓	✓	✓	✓	✓	38.80	✓	45.84	✓	45.84	✓	38.80	25.6	1334	7.59	1	6.39	265	1130	MW-21-2
1	1	✓	✓	✓	✓	✓	14.16	✓	14.97	✓	14.97	✓	14.16	23.9	843	8.14	1	6.57	234	1200	MW-21-1
	2	✓	✓	✓	✓	✓	14.13	✓	14.95	✓	14.95	✓	14.13								

Comments: MS/MSD @ MW-21-3
EB-6 073117 @ 1215
SB-2-073117 @ 1230

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-22
 SAMPLING DATE(S) 07/27/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 172.65
 ATM. PRESSURE (PSI): (Start) 14.06 (Finish) 14.08

PROBE TYPE Westbay
 SERIAL NO. Ems2502
 PROJECT: Bath @ JPL
 OPERATOR(S) J. Huang
 WEATHER Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample			
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) mg/L	ORP (mV)	Sample Time	Sample ID
3	1	✓	✓	✓	✓	✓	110.40	✓	93.14	✓	93.14	✓	110.40	20.9	638	7.29	2	6.41	254	0725	MW-22-3
2	1	✓	✓	✓	✓	✓	84.43	✓	67.13	✓	67.13	✓	84.43	20.6	617	7.76	3	5.91	263	0750	MW-22-2
1	1	✓	✓	✓	✓	✓	47.29	✓	31.46	✓	31.46	✓	47.29	20.4	1167	7.90	1	6.49	296	0820	MW-22-1

Comments: _____

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-23
 SAMPLING DATE(S): 07/28/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 125.99
 ATM. PRESSURE (PSI): (Start) 14.07 (Finish) 14.09

PROBE TYPE: Westbay
 SERIAL NO.: EMS2502
 PROJECT: Bodhi @ JPL
 OPERATOR(S): T. Hwang
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample			
		Arm out/ Land Probe	Shoe Out/ Close Valve/ Check Vacuum	Open Valve/ Apply Vacuum (5 psi)	Close Valve/ Shoe In/ Arm In	Locate Port/ Arm Out/ Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve/ Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) mg/L	ORP (mV)	Sample Time	Sample ID
4	1	✓	✓	✓	✓	✓	154.33	✓	142.89	✓	142.89	✓	154.33	20.2	408	7.57	2	6.52	241	0725	MW-23-4
3	1	✓	✓	✓	✓	✓	99.73	✓	91.06	✓	91.06	✓	99.73	26.0	518	8.02	1	7.11	250	0750	MW-23-3
2	1	✓	✓	✓	✓	✓	71.54	✓	63.06	✓	63.06	✓	71.54	21.5	1126	7.73	2	6.88	283	0825	MW-23-2
1	2	✓	✓	✓	✓	✓	71.52	✓	63.03	✓	63.03	✓	71.52								
1	1	✓	✓	✓	✓	✓	36.67	✓	29.76	✓	29.76	✓	36.67	23.2	1166	7.95	2	5.76	232	0910	MW-23-1

Comments: DUP-3-8217 @ MW-23-3 @ 0835

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-24
 SAMPLING DATE(S): 07/2/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 210.19
 ATM. PRESSURE (PSI): (Start) 14.03 (Finish) 14.06

PROBE TYPE: Westbay
 SERIAL NO.: EMS 2502
 PROJECT: Boehi @ JPL
 OPERATOR(S): Hogan
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)					Field Parameters					Sample				
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (± psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) mg/L	ORP (mV)	Sample Time	Sample ID
4	1	✓	✓	✓	✓	✓	165.13	✓	149.81	✓	149.81	✓	165.13	28.9	268	8.44	2	7.39	261	0935	MW-24-4
3	1	✓	✓	✓	✓	✓	113.73	✓	100.67	✓	100.67	✓	113.73	28.6	425	8.21	1	6.86	-104	1000	MW-24-3
2	1	✓	✓	✓	✓	✓	86.35	✓	74.30	✓	74.30	✓	86.35	28.0	583	8.30	2	7.05	214	1025	MW-24-2
1	1	✓	✓	✓	✓	✓	45.75	✓	35.99	✓	35.99	✓	45.75	24.5	737	8.21	1	7.26	205	1100	MW-24-1
1	2	✓	✓	✓	✓	✓	45.73	✓	35.98	✓	35.98	✓	45.73								

Comments: FB-4-072717 @ 1130

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-25
 SAMPLING DATE(S): 07/25/17
 LOCATION: Pasadena City Yard
 WATER LEVEL INSIDE CASING: 244.04
 ATM. PRESSURE (PSI): (Start) 19.10 (Finish) 17.12

PROBE TYPE: Westbay
 SERIAL NO.: FMS 2502
 PROJECT: Bodhi @ JPL
 OPERATOR(S): T. Hoang
 WEATHER: Clear

Port Number	Run Number	Probe to Top Collar	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)				Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters				Sample				
		Arm out / Land Probe	Shoe Out / Close Valve / Check Vacuum	Open Valve / Apply Vacuum (5 psi)	Close Valve / Shoe In / Arm In	Locate Port / Arm Out / Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm)	Sample Time	Sample ID	
5	1	✓	✓	✓	✓	✓	222.18	✓	206.92	✓	206.92	✓	222.18	23.6	446	9.32	2	4.91	1115	MW-25-5	ORP -71
4	1	✓	✓	✓	✓	✓	187.74	✓	171.56	✓	171.56	✓	187.74	23.1	808	6.93	1	6.45	1150	MW-25-4	-32
3	1	✓	✓	✓	✓	✓	131.82	✓	119.04	✓	119.04	✓	131.82	24.2	706	7.80	1	7.04	1215	MW-25-3	312
2	1	✓	✓	✓	✓	✓	96.65	✓	88.54	✓	88.54	✓	96.65	24.3	730	8.18	2	7.09	1250	MW-25-2	314
1	12	✓	✓	✓	✓	✓	68.34	✓	62.31	✓	62.31	✓	68.34	24.8	89.5	8.20	2	6.77	1320	MW-25-1	192
	2	✓	✓	✓	✓	✓	68.31	✓	62.32	✓	62.32	✓	68.31								

Comments: MS/MSD @ MW-25-1

FB-2-072517 @ 1330

**WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET**

WELL ID: MW-26
 SAMPLING DATE(S): 07/28/17
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 66.52
 ATM. PRESSURE (PSI): (Start) 14.08 (Finish) 14.10

PROBE TYPE: Vert-Hor
 SERIAL NO.: FM52502
 PROJECT: Palhi @ JPL
 OPERATOR(S): T. Hoang
 WEATHER: clear

Port Number	Run Number	Surface Function Tests / Position Sampler (probe in top of collar) / (lower probe to port)					Sample Collection Checks (probe at sampling port in MP casing)						Field Parameters					Sample				
		Arm out / Land Probe	Shoe Out/ Close Valve/ Check Vacuum	Open Valve/ Apply Vacuum (5 psi)	Close Valve/ Shoe In/ Arm In	Locate Port/ Arm Out/ Land Probe	Pressure in MP Casing (psi)	Shoe Out	Port Pressure (psi)	Open Valve	Port Pressure (psi)	Close Valve/ Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) mg/L	ORP (mV)	Sample Time	Sample ID	
2	1	✓	✓	✓	✓	✓	82.48	✓	60.50	✓	60.50	✓	82.48	26.6	827	8.42	2	6.88	266	1050	MW-26-2	
1	1	✓	✓	✓	✓	✓	47.50	✓	25.44	✓	25.44	✓	47.50	270	938	8.23	1	6.52	235	1110	MW-26-1	

Comments: EB-5-072817 @ 1125

WELL MONITORING DATA SHEET

Project #: <u>170721-HH1</u>	Site: <u>JPL</u>
Sampler: <u>HH</u>	Date: <u>08/02/17</u>
Well I.D.: <u>MW-5</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u> </u>
Total Well Depth (TD): <u>140.00</u>	Depth to Water (DTW): <u>99.83</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>107.86</u>	

Purge Method: Bailer Dec Waterra Sampling Method: Bailer
 Disposable Bailer 2' Rediflo pump Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

26PM @ 1020

2612 (Gals.) X 3 = 78.6 Gals.
 1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or <u>µS/cm</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	PTW Observations
<u>1027</u>	<u>18.9</u>	<u>6.84</u>	<u>484</u>	<u>2</u>	<u>0.51</u>	<u>19.1</u>	<u>14</u>	<u>102.39</u>
<u>1034</u>	<u>19.2</u>	<u>6.81</u>	<u>486</u>	<u>1</u>	<u>0.48</u>	<u>17.3</u>	<u>28</u>	<u>102.96</u>
<u>1041</u>	<u>19.4</u>	<u>6.65</u>	<u>487</u>	<u>1</u>	<u>0.45</u>	<u>16.9</u>	<u>42</u>	<u>102.99</u>
<u>1048</u>	<u>19.5</u>	<u>6.63</u>	<u>486</u>	<u>1</u>	<u>0.43</u>	<u>15.3</u>	<u>56</u>	<u>103.41</u>
<u>1055</u>	<u>19.3</u>	<u>6.61</u>	<u>486</u>	<u>1</u>	<u>0.44</u>	<u>14.1</u>	<u>70</u>	<u>103.55</u>
<u>1100</u>	<u>19.4</u>	<u>6.60</u>	<u>484</u>	<u>1</u>	<u>0.42</u>	<u>13.5</u>	<u>80</u>	<u>103.69</u>

Did well dewater? Yes No Gallons actually evacuated: 80

Sampling Date: 08/02/17 Sampling Time: 1101 Depth to Water: 103.69

Sample I.D.: MW-5 Laboratory: BC

Analyzed for: Seec.O.C Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: <u>170721-HH1</u>	Site: <u>JPL</u>
Sampler: <u>HH</u>	Date: <u>08/02/17</u>
Well I.D.: <u>MW-6</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 <u> </u>
Total Well Depth (TD): <u>245.00</u>	Depth to Water (DTW): <u>215.34</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>221.27</u>	

Purge Method: Bailer Decl Waterra Sampling Method: Bailer HH
 Disposable Bailer 2" (Rediflo) pump Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing
Other: (Rediflo)

26PM@0920

<u>19.3</u>	(Gals.) X	<u>3</u>	=	<u>57.9</u>	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp °C <u>(F)</u>	pH	Cond. (mS/cm or <u>μS/cm</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
<u>0925</u>	<u>20.7</u>	<u>7.06</u>	<u>1203</u>	<u>18</u>	<u>0.60</u>	<u>38.1</u>	<u>10</u>	<u>217.91</u>
<u>0930</u>	<u>21.1</u>	<u>6.89</u>	<u>1201</u>	<u>17</u>	<u>0.58</u>	<u>33.9</u>	<u>20</u>	<u>218.25</u>
<u>0935</u>	<u>21.3</u>	<u>6.85</u>	<u>1200</u>	<u>16</u>	<u>0.55</u>	<u>34.2</u>	<u>30</u>	<u>218.29</u>
<u>0940</u>	<u>21.4</u>	<u>6.82</u>	<u>1996</u>	<u>16</u>	<u>0.54</u>	<u>33.5</u>	<u>40</u>	<u>218.31</u>
<u>0945</u>	<u>21.6</u>	<u>6.79</u>	<u>1998</u>	<u>15</u>	<u>0.53</u>	<u>35.3</u>	<u>50</u>	<u>218.35</u>
<u>0949</u>	<u>21.5</u>	<u>6.77</u>	<u>1997</u>	<u>15</u>	<u>0.51</u>	<u>36.1</u>	<u>58</u>	<u>218.39</u>

Did well dewater? Yes (No) Gallons actually evacuated: 58

Sampling Date: 08/02/17 Sampling Time: 0950 Depth to Water: 218.39

Sample I.D.: MW-6 Laboratory: BC

Analyzed for: SEAK Other: Seel. O-C

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-7-3017 @

FB I.D. (if applicable): @ Time Analyzed for: /1000

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 170721-HH1	Site: JPL
Sampler: HH	Date: 08/03/17
Well I.D.: MW-7	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 267.60	Depth to Water (DTW): 238.51
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 249.32	

Purge Method: Bailer Waterra Sampling Method: Bailer ^{HH}
 Disposable Bailer 2" Rediflo pump Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing
 Other: New

26PM @ 0900

19 (Gals.) X 3 = 57 Gals.
 I Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp °C	pH	Cond. (mS/cm or <u>µS/cm</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
0905	23.4	7.67	936	55	0.66	-104.1	10	241.31
0910	23.6	7.41	920	31	0.63	-89.6	20	242.05
0915	22.8	7.20	911	24	0.61	-85.3	30	242.49
0920	22.7	7.18	910	22	0.58	-84.1	40	242.56
0925	22.5	7.16	908	22	0.55	-82.3	50	242.59
0929	22.3	7.15	906	21	0.56	-80.6	58	242.65

Did well dewater? Yes No Gallons actually evacuated: 58

Sampling Date: 08/03/17 Sampling Time: 0935 Depth to Water: ^{HH} 246.242.65

Sample I.D.: MW-7 Laboratory: BC

Analyzed for: See C.O.U Other:

EB I.D. (if applicable): EB-9-080317 @ 0945 Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 170721-HH1	Site: JPL
Sampler: HH	Date: 08/02/17
Well I.D.: MW-8	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 205.00	Depth to Water (DTW): 164.71
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 172.76	

Purge Method: Bailer
 Disposable Bailer
 Positive Air Displacement
 Electric Submersible

Ded. Waterra
 2" Rediflo pump
 Extraction Pump
 Other _____

Sampling Method: Bailer
 Disposable Bailer
 Extraction Port
 Dedicated Tubing
 Other: _____

26.2 26 PM @ 1220

$$\frac{\text{Case Volume}}{\text{Specified Volumes}} \times \text{Specified Volumes} = \text{Calculated Volume}$$

$$\frac{3}{2.3} \times 2.3 = 78.6 \text{ Gals.}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or <u>µS/cm</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
1227	17.7	7.24	682	3	2.60	-10.4	14	168.91
1234	18.5	7.05	681	2	2.31	-7.5	28	169.19
1241	19.0	6.96	675	2	2.10	-6.6	42	170.11
1248	19.3	6.94	673	1	2.05	-5.1	56	170.45
1255	19.5	6.92	671	1	2.03	-4.7	70	170.71
1300	19.6	6.91	670	1	2.02	-4.4	80	170.75

Did well dewater? Yes No Gallons actually evacuated: 80

Sampling Date: 08/02/17 Sampling Time: 1301 Depth to Water: 170.15

Sample I.D.: MW-8 Laboratory: BC

Analyzed for: Seel. O. C Other: _____

EB I.D. (if applicable): EB-8-080017 @ 1315 Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

MS/msd

WELL MONITORING DATA SHEET

Project #: 170721-11H1	Site: JPL
Sampler: HH	Date: 08/03/17
Well I.D.: MW-10	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 155.00	Depth to Water (DTW): 116.55
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 124.24	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible Ded. Waterra Rediflo pump Extraction Pump Other _____

Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____

26PM @ 0635

25	(Gals.) X	3	=	75	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp °C(°F)	pH	Cond. (mS/cm or <u>µS/cm</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
0641	20.9	7.11	625	3	2.51	39.6	12	119.11
0647	20.1	6.90	639	2	2.40	35.1	24	120.43
0653	20.1	6.75	638	2	2.33	31.9	36	120.96
0659	20.1	6.73	636	1	2.30	28.8	48	121.25
0706	20.1	6.71	638	1	2.26	26.3	62	121.40
0713	20.2	6.69	639	1	2.24	24.9	76	121.59

Did well dewater? Yes No Gallons actually evacuated: 76

Sampling Date: 08/03/17 Sampling Time: 0715 Depth to Water: 121.59

Sample I.D.: MW-10 Laboratory: BC

Analyzed for: Bee C.O.C Other: _____

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

FB I.D. (if applicable): _____ @ _____ Time Analyzed for: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

ms/msd

WELL MONITORING DATA SHEET

Project #: 170721-1A11	Site: JPL
Sampler: H14	Date: 08/02/17
Well I.D.: MW-13	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 234.95	Depth to Water (DTW): 210.13
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 215.09	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer 2" Rediflo pump Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

Other: _____

26PM @ 0820

16.2 (Gals.) X	3	=	48.6 Gals.
1 Case Volume	Specified Volumes		Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
0824	23.4	7.15	709	95	1.12	25.6	8	211.91
0828	22.4	6.99	701	39	1.17	17.5	16	212.36
0832	22.2	6.93	688	24	1.99	16.9	24	212.89
0836	22.5	6.92	700	23	2.45	14.3	32	213.46
0840	22.4	6.91	701	23	2.49	12.9	40	213.65
0845	22.3	6.91	699	22	2.53	11.6	50	213.81

Did well dewater? Yes No Gallons actually evacuated: 50

Sampling Date: 08/02/17 Sampling Time: 0850 Depth to Water: 213.11

Sample I.D.: MW-13 Laboratory: BC

Analyzed for: See C.C.C Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-6-3617

FB I.D. (if applicable): @ Time Analyzed for: @ 0900

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 170721-HH1	Site: JPL
Sampler: HH	Date: 08/02/17
Well I.D.: MW-15	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 74.00	Depth to Water (DTW): 34.65
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 42.52	

Purge Method: Bailer Decl Waterra Sampling Method: Bailer
 Disposable Bailer 2" Rediflo pump Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

Other:

26PM @ 1110

$$\frac{25.6 \text{ (Gals.)} \times 3}{\text{I Case Volume Specified Volumes}} = \frac{76.8 \text{ Gals.}}{\text{Calculated Volume}}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp 'C (°F)	pH	Cond. (mS/cm or <u>µS/cm</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	PTW Observations
1116	17.6	7.20	533	3	0.68	19.1	12	36.91
1122	17.3	7.14	531	2	0.65	12.4	24	37.55
1128	17.5	7.05	535	2	0.57	10.4	36	37.73
1134	17.8	7.03	536	1	0.55	8.3	48	37.79
1140	17.7	7.02	534	1	0.52	7.5	60	37.94
1149	17.7	6.99	531	1	0.51	7.2	78	38.05

Did well dewater? Yes No Gallons actually evacuated: 78

Sampling Date: 08/02/17 Sampling Time: 1150 Depth to Water: 38.05

Sample I.D.: MW-15 Laboratory: BC

Analyzed for: See C.O.C Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

ms/msd

WELL MONITORING DATA SHEET

Project #: 170721-HH1	Site: JPL
Sampler: HH	Date: 08/03/17
Well I.D.: MW-16	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 284.77	Depth to Water (DTW): 260.53
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type: YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 265.37	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer 2" Rediflo pump Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing
 Other: New

20 PM @ 0800

15.8 (Gals.) X 3 = 47.4 Gals.
 I Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or <u>µS/cm</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
0804	24.3	7.51	824	31	0.83	-72.4	8	262.10
0808	22.9	7.30	820	20	0.79	-60.1	16	262.66
0812	21.6	7.21	826	17	0.71	-57.2	24	262.85
0816	20.9	7.18	814	16	0.67	-53.4	32	262.98
0820	20.7	7.16	812	15	0.63	-51.7	40	263.11
0824	20.6	7.15	810	15	0.61	-50.2	48	263.19

Did well dewater? Yes No Gallons actually evacuated: 48 263.19

Sampling Date: 08/03/17 Sampling Time: 0830 Depth to Water: 263.19

Sample I.D.: MW-16 Laboratory: BC

Analyzed for: See C.O.C Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

ms/msd