

ATTACHMENT 4: FIELD LOGS

This attachment contains the groundwater sample collection field logs for the relatively shallow standpipe monitoring wells (MW-1, MW-5 through 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 2nd Quarter 2018 sampling event was conducted by Blaine Tech Services, Inc.

WELL MONITORING DATA SHEET

Project #: 080417-HH1	Site: JPL
Sampler: KT	Date: 4-27-10
Well I.D.: MW-1	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 120.00	Depth to Water (DTW): 24.85
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 48.28	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible DED Waterra 2" Red Ho pump Extraction Pump Other _____

Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing

117.15

3 Neg pm

76.1 (Gals.) X 3 = 228.4 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	DTW Observations
0922	59.5	7.66	572	3	2.06	134	38	24.93
0935	59.8	7.64	572	3	0.44	131	76	25.26
0940	59.7	7.77	572	3	0.35	130	114	25.50
1001	60.0	7.79	571	3	0.32	126	152	25.
1014	60.2	7.70	572	3	0.30	128	190	25.
1027	60.3	7.70	572	2	0.28	127	20 228.5	25.

Did well dewater? Yes No Gallons actually evacuated: 228.5

Sampling Date: 4-27-10 Sampling Time: 1030 Depth to Water: 25.

Sample I.D.: MW-1 Laboratory: BC

Analyzed for: SET COC 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

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-3
 SAMPLING DATE(S): 04/23/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 174.40
 ATM. PRESSURE (PSI): (Start) 14.03 (Finish) 14.05

PROBE TYPE: Westbay
 SERIAL NO.: FMS2502
 PROJECT: 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 (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>mg/L</i>	ORP (mv)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	227.34	✓	235.01	✓	235.01	✓	227.34	17.4	782	7.31	10	5.34	214	0745	MW-3-5
4	1	✓	✓	✓	✓	✓	186.07	✓	194.93	✓	194.93	✓	186.07	17.9	628	7.45	40	4.85	230	0820	MW-3-4
3	1	✓	✓	✓	✓	✓	93.78	✓	103.19	✓	103.20	✓	93.78	17.6	618	7.05	7	5.59	205	0840	MW-3-3
2	1	✓	✓	✓	✓	✓	52.81	✓	62.58	✓	62.58	✓	52.81	18.3	619	7.52	5	4.65	210	0915	MW-3-2
	2	✓	✓	✓	✓	✓	52.83	✓	62.59	✓	62.59	✓	52.83								
	3	✓	✓	✓	✓	✓	52.88	✓	62.57	✓	62.57	✓	52.88								
	4	✓	✓	✓	✓	✓	52.89	✓	62.60	✓	62.60	✓	52.89								
	5	✓	✓	✓	✓	✓	52.88	✓	62.59	✓	62.59	✓	52.88								
1	1	✓	✓	✓	✓	✓	18.05	✓	31.36	✓	31.36	✓	18.05	20.2	618	7.40	5	4.73	203	1100	MW-3-1

Comments: TB-4-042318
EB-4-042318
SB-2-042318

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-4
 SAMPLING DATE(S): 04/19/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 151.24
 ATM. PRESSURE (PSI): (Start) 14.11 (Finish) 14.12

PROBE TYPE: Westbay
 SERIAL NO.: EMS 2502
 PROJECT: JPL
 OPERATOR(S): T. Horng
 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	✓	✓	✓	✓	✓	176.42	✓	184.21	✓	184.21	✓	176.42	14.8	695	6.81	11	5.65	128	0745	MW-4-5
4	1	✓	✓	✓	✓	✓	123.86	✓	131.84	✓	131.84	✓	123.86	14.2	803	7.17	7	5.23	138	0815	MW-4-4
3	1	✓	✓	✓	✓	✓	93.37	✓	101.51	✓	101.51	✓	93.37	14.6	1046	7.33	8	5.61	130	0900	MW-4-3
2	1	✓	✓	✓	✓	✓	57.56	✓	66.04	✓	66.04	✓	57.56	14.4	1246	7.45	2	5.05	197	0935	MW-4-2
	2	✓	✓	✓	✓	✓	57.58	✓	66.05	✓	66.05	✓	57.58								
	3	✓	✓	✓	✓	✓	57.60	✓	66.08	✓	66.08	✓	57.60								
	4	✓	✓	✓	✓	✓	57.61	✓	66.07	✓	66.07	✓	57.61								
	5	✓	✓	✓	✓	✓	57.58	✓	66.05	✓	66.05	✓	57.58								
1	1	✓	✓	✓	✓	✓	18.30	✓	31.70	✓	31.70	✓	18.30	12.9	465	7.91	3	4.89	201	1145	MW-4-1
	2	✓	✓	✓	✓	✓	18.31	✓	31.68	✓	31.68	✓	18.31								
	3	✓	✓	✓	✓	✓	18.34	✓	31.71	✓	31.71	✓	18.34								

Comments: TB-2-04/19/18

WELL MONITORING DATA SHEET

(5)

Project #: 1804	Site: JPL
Sampler: KT	Date: 4.26.18
Well I.D.: MW-5	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 140.00	Depth to Water (DTW): 101.07
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVE) Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 108.85	

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

38.93

Other:

3 gpm

25.3	(Gals.) X	3	=	75.9	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
0840	65.8	6.84	569	4	0.89	126	13	101.16
0844	65.9	6.85	572	3	0.85	129	26	101.16
0848	65.9	6.85	577	3	0.80	131	39	101.16
0852	66.0	6.85	579	3	0.78	130	52	101.16
0856	66.1	6.85	583	2	0.76	129	65	101.16
0902	66.1	6.85	581	2	0.75	130	76	101.16

Did well dewater? Yes (No) Gallons actually evacuated: 76

Sampling Date: 4.26.18 Sampling Time: 0905 Depth to Water: 101.16

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

Analyzed for: See CoC 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

(165)

Project #: 1804	Site: JPL
Sampler: KT	Date: 4.26.18
Well I.D.: MW-6	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 245.00 (DED)	Depth to Water (DTW): 217.64
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 223.11	

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

27.36

3 gpm

17.7 (Gals.) X 3 = 53.3 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 µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
0754	68.4	7.05	1056	13	3.44	162	8	218.12
0756	69.3	7.02	1073	9	3.16	160	16	218.12
0758	70.5	7.00	1082	7	2.83	156	24	218.13
0800	70.6	6.99	1094	6	2.80	155	32	218.13
0802	70.5	6.99	1104	5	2.64	152	40	218.13
0804	70.4	6.98	1103	5	2.67	150	48	218.13
0806	70.4	6.99	1109	5	2.70	149	54	218.13

Did well dewater? Yes No Gallons actually evacuated: 54

Sampling Date: 4.26.18 Sampling Time: 0808 Depth to Water: 218.13

Sample I.D.: MW-6 (MSMSD) Laboratory: BC

Analyzed for: See CoC 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

6

Project #: 1804	Site: JPL
Sampler: KT	Date: 4-26-10
Well I.D.: MW-7	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 267.52	Depth to Water (DTW): 243.72
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]: 248.40	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer 2 1/2" Rediflo pump Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

2 gpm

$$\frac{15.4 \text{ (Gals.)} \times 3 \text{ Specified Volumes}}{1 \text{ Case Volume}} = 46.4 \text{ Gals. Calculated Volume}$$

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	Observations
1309	74.4	7.21	784	21	5.15	101.6 ^{KT}	0	243.78
1313	74.3	7.19	792	16	5.00	100.	16	243.79
1317	74.0	7.20	795	15	5.02	96	24	243.79
1321	73.8	7.19	796	13	5.07	89	32	243.79
1325	73.8	7.19	793	12	5.10	94	40	243.79
1328	73.8	7.19	791	12	5.09	92	47	243.79

Did well dewater? Yes No Gallons actually evacuated: 47

Sampling Date: 4-26-10 Sampling Time: ~~1330~~ ^{KT} 1330 Depth to Water: 243.79

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

Analyzed for: See Col 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

(11)

Project #: 1804	Site: JDL
Sampler: KT	Date: 4.26.10
Well I.D.: MW-0	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 205.00	Depth to Water (DTW): 109.71
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 175.90	

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

36.29

3 gpm
 23.5 (Gals.) X 3 = 70.7 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 μS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
1103	72.4	7.05	941	10	5.55	101	12	109.09
1106	72.6	7.02	919	7	5.63	103	24	109.12
1109	72.5	7.02	889	6	5.70	100	36	109.13
1112	72.7	7.01	873	5	5.68	99	48	109.13
1115	72.8	7.00	870	3	5.66	98	60	109.13
1118	72.9	7.00	866	3	5.67	98	71	109.13

Did well dewater? Yes No Gallons actually evacuated: 71

Sampling Date: 4.26.10 Sampling Time: 1120 Depth to Water: 109.13

Sample I.D.: MW-0 (MSMSD) Laboratory: BC

Analyzed for: See COC 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 #: 190416-KT1	Site: JPL
Sampler: KT	Date: 4.27.18
Well I.D.: MW-10	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth (TD): 155	Depth to Water (DTW): 119.80
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: PVC Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 126.84	

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

35.20

2 gpm

$$\frac{22.8 \text{ (Gals.)} \times 3}{1 \text{ Case Volume}} = \frac{68.6 \text{ Gals.}}{\text{Specified Volumes}} = \text{Calculated Volume}$$

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 (°F)	pH	Cond. (mS/cm or <u>µS/cm</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
1230	66.9	6.92	831	5	0.92	156.7	11.5	119.89
1243	67.5	6.94	884	4	0.81	122.4	23.0	119.92
1249	68.2	6.94	893	3	0.67	116.2	34.5	119.92
1255	69.4	6.95	899	3	0.62	111.0	46.0	119.92
1305 1301	69.5	6.95	904	3	0.58	109.3	57.5	119.92
1307	69.6	6.95	905	3	0.54	108.2	69.0	119.92

Did well dewater? Yes No Gallons actually evacuated: 69.0

Sampling Date: 4.27.18 Sampling Time: 1310 Depth to Water: 119.92

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

Analyzed for: See COC 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

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-11
 SAMPLING DATE(S) 04/25/18 + 04/26/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 174.88
 ATM. PRESSURE (PSI): (Start) 14.12 (Finish) 14.15

PROBE TYPE Westbay
 SERIAL NO. EWS 2502
 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 (ppm) mg/L	ORP (mv)	Sample Time	Sample ID	
0	1	✓	✓	✓	✓	✓	✓	217.85	✓	209.40	✓	209.40	✓	217.85	24.5	346	8.52	2	4.86	180	1415	MW-11-5	
	2	✓	✓	✓	✓	✓	✓	217.80	✓	209.39	✓	209.39	✓	217.80									
4	1	✓	✓	✓	✓	✓	✓	169.58	✓	169.63	✓	169.63	✓	169.58	23.2	256	8.89	3	4.05	112	1500	MW-11-4	
3	1	✓	✓	✓	✓	✓	✓	130.62	✓	126.05	✓	126.05	✓	130.62	21.5	439	8.54	2	4.73	187	1300	MW-11-3	
	2	✓	✓	✓	✓	✓	✓	130.55	✓	126.03	✓	126.03	✓	130.55									
2	1	✓	✓	✓	✓	✓	✓	56.69	✓	54.84	✓	54.84	✓	56.69	23.2	461	8.40	3	4.85	119	1345	MW-11-2	
1	1	✓	✓	✓	✓	✓	✓	14.10	✓	25.23	✓	25.23	✓	14.10	21.3	667	8.30	4	4.99	135	1420	MW-11-1	
	2	✓	✓	✓	✓	✓	✓	14.08	✓	25.25	✓	25.25	✓	14.08									

Comments: DUP-6-2Q18 @ MW-11-3 @ 1310

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-12
 SAMPLING DATE(S) 04/26/18 + 04/27/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 134.89
 ATM. PRESSURE (PSI): (Start) 14.10 (Finish) 14.11

PROBE TYPE Wes Flow
 SERIAL NO. EMS 2502
 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 (ppm) mg/L	ORP (mv)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	198.81	✓	187.92	✓	187.92	✓	198.81	19.5	498	8.53	3	5.31	207	1545	MW-12-5
4	1	✓	✓	✓	✓	✓	150.11	✓	142.78	✓	142.78	✓	150.11	18.9	526	8.65	3	4.75	226	1620	MW-12-4
3	1	✓	✓	✓	✓	✓	101.09	✓	93.97	✓	93.97	✓	101.09	17.6	458	8.53	2	4.55	179	1130	MW-12-3
	2	✓	✓	✓	✓	✓	101.05	✓	93.95	✓	93.95	✓	101.05								
2	1	✓	✓	✓	✓	✓	66.00	✓	59.82	✓	59.82	✓	66.00	17.3	569	8.43	4	5.09	194	1230	MW-12-2
1	1	✓	✓	✓	✓	✓	20.98	✓	22.65	✓	22.65	✓	20.98	16.9	645	8.35	3	4.39	267	1300	MW-12-1
	2	✓	✓	✓	✓	✓	20.93	✓	22.63	✓	22.63	✓	20.93								

Comments: DUP-8-2018 @ MW-12¹² -3 @ 1140

WELL MONITORING DATA SHEET

Project #: 180417- KH1	Site: JPL
Sampler: KT	Date: 4.26.18
Well I.D.: MW-13	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 234.05	Depth to Water (DTW): 215.00
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	Flow Cell Type: YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

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

Other: 19.05

2 gpm ~~1000~~

12.7 (Gals.) X 3 = 38.3 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
→ 1000	71.9	7.23	819	8	6.12	126	6.5	215.20
1003	72.2	7.18	822	6	5.83	125	13.0	215.22
1004	72.3	7.19	825	5	5.42	123	19.5	215.22
1009	72.3	7.19	822	5	5.36	124	26.0	215.22
1012	72.3	7.18	823	5	5.32	122	32.5	215.22
1015	72.3	7.19	825	5	5.33	120	39.0	215.22

Did well dewater? Yes (No) Gallons actually evacuated: 39

Sampling Date: 4.26.18 Sampling Time: 1020 Depth to Water: 215.22

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

Analyzed for: See CoC 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

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-14
 SAMPLING DATE(S) 04/19/18 + 04/20/18
 LOCATION: SPL
 WATER LEVEL INSIDE CASING: 192.03
 ATM. PRESSURE (PSI): (Start) 14.05 (Finish) 14.12

PROBE TYPE West Bay
 SERIAL NO. EMS2502
 PROJECT: SPL
 OPERATOR(S) T. Hoagy
 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
5	1	✓	✓	✓	✓	✓	170.85	✓	161.14	✓	161.14	✓	170.55	20.6	358	8.17	2	3.85	92	1345	MW-14-5
4	1	✓	✓	✓	✓	✓	133.83	✓	124.71	✓	124.71	✓	133.83	20.4	722	8.14	2	4.15	171	1430	MW-14-4
	2	✓	✓	✓	✓	✓	133.80	✓	124.70	✓	124.70	✓	133.80								MW-14-3
3	1	✓	✓	✓	✓	✓	102.37	✓	92.67	✓	92.67	✓	102.37	20.8	1222	8.00	1	3.91	221	1125	MW-14-3
2	1	✓	✓	✓	✓	✓	56.21	✓	46.91	✓	46.91	✓	56.21	20.8	1290	7.90	2	4.05	204	1150	MW-14-2
1	1	✓	✓	✓	✓	✓	25.36	✓	16.29	✓	16.29	✓	25.36	22.1	1296	7.83	2	4.53	213	1215	MW-14-1
	2	✓	✓	✓	✓	✓	25.29	✓	16.30	✓	16.30	✓	25.29								

Comments: FB-2-041918

DUP-1-2018 @ MW-14-4 @ 1440

WELL MONITORING DATA SHEET

⑤

Project #: 1804	Site: JPL
Sampler: VT	Date: 4-26-18
Well I.D.: 4 MW-15	Well Diameter: 2 3 ④ 6 8
Total Well Depth (TD): 74.00	Depth to Water (DTW): 30.58
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVO</u> Grade	Flow Cell Type: YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 39.20	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer 2" Reddy pump 43.42 Disposable Bailer
 Positive Air Displacement Extraction Pump Extraction Port
 Electric Submersible Other _____ Dedicated Tubing

3 gpm

20.2	(Gals.) X	3	=	84.6	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	DTW Observations
1208	67.2	7.44	606	12	1.08	129	14.5	30.64
1213	67.4	7.41	609	10	1.09	125	29.0	30.64
1218	67.3	7.40	615	8	1.05	122	43.5	30.64
1223	67.2	7.39	619	9	1.02	120	58.0	30.64
1228	67.2	7.39	622	8	1.00	122	72.5	30.64
1232	67.2	7.39	625	8	0.98	121	85	30.64

Did well dewater? Yes No Gallons actually evacuated: 85

Sampling Date: 4-26-18 Sampling Time: 1235 Depth to Water: 30.64

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

Analyzed for: See CoC 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>180410-KT1</u>	Site: <u>JPL</u>
Sampler: <u>KT</u>	Date: <u>4-27-10</u>
Well I.D.: <u>MW-10</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD):	Depth to Water (DTW): <u>205.95</u>
Depth to Free Product: <u> </u>	Thickness of Free Product (feet): <u> </u>
Referenced to: <u>PVO</u> Grade	Flow Cell Type: <u>YSI 556</u>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

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

Other:

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

_____ (Gals.) X	← _____	= _____ Gals.	
1 Case Volume	Specified Volumes	Calculated Volume	

Time	Temp (°F)	pH	Cond. (mS/cm or <u>µS/cm</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
—	<u>GRAB</u>		<u>SAMPLE TAKEN</u>					
<u>1145</u>	<u>75.2</u>	<u>8.35</u>	<u>759</u>	<u>8</u>	<u>1.62</u>	<u>114</u>		

Did well dewater? Yes No Gallons actually evacuated: _____

Sampling Date: 4-27-10 Sampling Time: 1145 Depth to Water: 205.95

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

Analyzed for: see COC 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

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-17
 SAMPLING DATE(S): 04/25/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 208.33
 ATM. PRESSURE (PSI): (Start) 14.08 (Finish) 14.09

PROBE TYPE: Westbay
 SERIAL NO.: EM52502
 PROJECT: JPL
 OPERATOR(S): T. Harsh
 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
4	1	✓	✓	✓	✓	✓	241.05	✓ 220.07	✓ 220.07	✓ 241.05	15.5	702	7.11	4	MSIL 5.69	235	0730	MW-17-5	
	2	✓	✓	✓	✓	✓	178.49	✓ 159.62	✓ 159.62	✓ 178.49	16.6	741	7.59	3	5.01	249	0800	MW-17-4	
	3	✓	✓	✓	✓	✓	178.45	✓ 159.61	✓ 159.61	✓ 178.45									
	3	✓	✓	✓	✓	✓	178.41	✓ 159.63	✓ 159.63	✓ 178.41									
	3	✓	✓	✓	✓	✓	129.19	✓ 109.53	✓ 109.53	✓ 129.19	22.1	969	7.03	2	4.63	220	0930	MW-17-3	
	2	✓	✓	✓	✓	✓	129.17	✓ 109.55	✓ 109.55	✓ 129.17									
	3	✓	✓	✓	✓	✓	129.16	✓ 109.53	✓ 109.53	✓ 129.16									
	4	✓	✓	✓	✓	✓	129.18	✓ 109.52	✓ 109.52	✓ 129.18									
	5	✓	✓	✓	✓	✓	129.15	✓ 109.50	✓ 109.50	✓ 129.15									
2	1	✓	✓	✓	✓	✓	86.80	✓ 70.74	✓ 70.74	✓ 86.80	21.3	702	7.65	2	4.53	212	1120	MW-17-2	
	2	✓	✓	✓	✓	✓	86.75	✓ 70.72	✓ 70.72	✓ 86.75									
1	1	✓	✓	✓	✓	✓	34.58	✓ 19.33	✓ 19.33	✓ 34.58	18.9	515	8.36	3	5.83	210	1200	MW-17-1	
	2	✓	✓	✓	✓	✓	33.99	✓ 19.35	✓ 19.35	✓ 33.99									

Comments: DUP-5-2018 @ MW-17-2 @ 1130

EB-6-042518

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-18-
 SAMPLING DATE(S) 04/26/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 294.20
 ATM. PRESSURE (PSI): (Start) 14.07 (Finish) 14.09

PROBE TYPE Westbay
 SERIAL NO. EM52502
 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 (ppm) mg/L	ORP (mv)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	188.41	✓	185.56	✓	185.76	✓	188.41	18.1	454	8.45	3	3.91	61	0820	MW-18-5
4	1	✓	✓	✓	✓	✓	136.30	✓	136.21	✓	136.21	✓	136.30	22.8	502	8.31	2	4.15	205	0900	MW-18-4
	2	✓	✓	✓	✓	✓	136.25	✓	136.20	✓	136.20	✓	136.25				*				
	3	✓	✓	✓	✓	✓	136.22	✓	136.23	✓	136.23	✓	136.22								
	4	✓	✓	✓	✓	✓	136.19	✓	136.24	✓	136.24	✓	136.19								
	5	✓	✓	✓	✓	✓	136.15	✓	136.23	✓	136.23	✓	136.15								
3	1	✓	✓	✓	✓	✓	75.33	✓	79.19	✓	79.19	✓	75.33	20.4	574	8.36	3	4.66	224	1100	MW-18-3
2	1	✓	✓	✓	✓	✓	34.37	✓	36.67	✓	36.67	✓	34.37	21.3	585	8.53	2	4.75	209	1125	MW-18-2
1	1	✓	✓	✓	✓	✓	14.14	✓	14.13	✓	14.13	✓	14.14	port is dry - no sample taken				1200	MW-18-1		

Comments: TB-7-042618
EB-7-042618

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-19
 SAMPLING DATE(S) 09/20/18
 LOCATION: SPL
 WATER LEVEL INSIDE CASING: 139.80
 ATM. PRESSURE (PSI): (Start) 14.08 (Finish) 14.10

PROBE TYPE Westbay
 SERIAL NO. EM5 2502
 PROJECT: SPL
 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 (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
5	1	✓	✓	✓	✓	✓	171.63	✓	146.20	✓	146.20	✓	171.63	15.6	743	7.29	2	5.05	272	0720	MW-19-5
4	1	✓	✓	✓	✓	✓	148.04	✓	122.84	✓	122.84	✓	148.04	15.2	717	7.05	1	4.63	260	0745	MW-19-4
3	1	✓	✓	✓	✓	✓	125.49	✓	101.75	✓	101.75	✓	125.49	15.8	820	7.27	2	4.75	229	0815	MW-19-3
2	1	✓	✓	✓	✓	✓	91.73	✓	67.48	✓	67.48	✓	91.73	14.8	1020	7.20	3	4.80	231	0900	MW-19-2
	2	✓	✓	✓	✓	✓	91.72	✓	67.47	✓	67.47	✓	91.72								
	3	✓	✓	✓	✓	✓	91.69	✓	67.46	✓	67.46	✓	91.69								
	4	✓	✓	✓	✓	✓	91.71	✓	67.47	✓	67.47	✓	91.71								
	5	✓	✓	✓	✓	✓	91.68	✓	67.45	✓	67.45	✓	91.68								
1	1	✓	✓	✓	✓	✓	60.30	✓	36.39	✓	36.39	✓	60.30	20.1	695	7.88	2	4.66	22.5	1030	MW-19-1

Comments: TB-3 042018

EP-3-042018

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: ^{#11} ~~MW-12~~ MW-20
 SAMPLING DATE(S) 09/27/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 239.73
 ATM. PRESSURE (PSI): (Start) 140.3 (Finish) 14.05

PROBE TYPE Westbay
 SERIAL NO. EMS2502
 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 (0 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
5	1	✓	✓	✓	✓	✓	306.01	✓	306.70	✓	306.70	✓	306.01	15.2	468	749	3	5.05 molt	68	0735	MW-20-5
4	1	✓	✓	✓	✓	✓	218.99	✓	214.09	✓	214.09	✓	218.99	15.7	347	820	2	4.80	-31	0810	MW-20-4
3	1	✓	✓	✓	✓	✓	158.57	✓	150.16	✓	150.16	✓	158.87	15.7	339	833	3	4.71	-45	0845	MW-20-3
2	1	✓	✓	✓	✓	✓	84.88	✓	81.04	✓	81.04	✓	84.88	15.8	647	842	3	4.53	158	0915	MW-20-2
	2	✓	✓	✓	✓	✓	84.09	✓	81.02	✓	81.02	✓	84.09								
1	1	✓	✓	✓	✓	✓	14.18	✓	14.17	✓	14.17	✓	14.18	partly Dry - No sample taken						1015	MW-20-1

Comments: DUP-7-2218 @ MW-20-2 @ 0925
 EB-8-042718 @ 1030

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-21
 SAMPLING DATE(S) 04/20/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 115.95
 ATM. PRESSURE (PSI): (Start) 14.11 (Finish) 14.13

PROBE TYPE Westbay
 SERIAL NO. FMS 2502
 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 (± 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	✓	✓	✓	✓	✓	130.23	✓	136.24	✓	136.24	✓	130.23	25.3	935	8.43	2	5.35	201	1335	MW-21-5
4	1	✓	✓	✓	✓	✓	103.56	✓	109.39	✓	109.39	✓	103.56	22.9	893	8.29	1	5.04	195	1400	MW-21-4
3	1	✓	✓	✓	✓	✓	73.32	✓	79.53	✓	79.53	✓	79.32	21.8	1296	7.91	1	5.36	218	1420	MW-21-3
	2	✓	✓	✓	✓	✓	73.30	✓	79.52	✓	79.52	✓	73.30								MW-21-#A
2	1	✓	✓	✓	✓	✓	39.26	✓	45.30	✓	45.30	✓	39.26	22.3	1366	8.16	2	5.40	224	1500	MW-21-2
1	1	✓	✓	✓	✓	✓	14.08	✓	14.13	✓	14.13	✓	14.08	- port is Dry - No sample Taken							

Comments: POP-2-2618 @ MW-21-3 @ 1430

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-22
 SAMPLING DATE(S): 09/29/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 193.08
 ATM. PRESSURE (PSI): (Start) 14.01 (Finish) 14.03

PROBE TYPE: Westbay
 SERIAL NO.: EMS 2502
 PROJECT: JPL
 OPERATOR(S): T. 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)	ORP (mv)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	187.97	✓	176.87	✓	176.87	✓	187.97	18.5	476	7.72	2	3.77	-76	0800	MW-22-5
4	1	✓	✓	✓	✓	✓	136.30	✓	125.50	✓	125.50	✓	136.30	17.8	428	7.80	3	4.05	139	0830	MW-22-4
3	1	✓	✓	✓	✓	✓	101.72	✓	93.04	✓	93.04	✓	101.72	17.9	469	8.05	4	4.61	182	0900	MW-22-3
	2	✓	✓	✓	✓	✓	101.70	✓	92.96	✓	92.96	✓	101.70								
2	1	✓	✓	✓	✓	✓	75.41	✓	66.78	✓	66.78	✓	75.41	19.0	672	7.84	3	4.77	193	0930	MW-22-2
	2	✓	✓	✓	✓	✓	75.39	✓	66.69	✓	66.69	✓	75.39								
1	1	✓	✓	✓	✓	✓	38.45	✓	30.00	✓	30.00	✓	38.45	21.6	1278	7.90	4	4.51	207	1015	MW-22-1

Comments: DWR-3-2918 @ MW-22-3 @ 0910 EB-5-042418
MS/MSP @ MW-22-2

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-23
 SAMPLING DATE(S): 09/18/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 135.48
 ATM. PRESSURE (PSI): (Start) 14.12 (Finish) 14.14

PROBE TYPE: C. Wetley
 SERIAL NO.: FMS2502
 PROJECT: JPL
 OPERATOR(S): T. Holmes
 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) msl	ORP (mv)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	192.51	✓	185.60	✓	185.60	✓	192.51	16.4	430	8.30	3	4.05	-31	0730	MW-23-5
4	1	✓	✓	✓	✓	✓	150.32	✓	143.75	✓	143.75	✓	150.32	17.8	373	8.05	2	3.91	150	0805	MW-23-4
3	1	✓	✓	✓	✓	✓	96.05	✓	90.67	✓	90.67	✓	96.05	19.6	526	7.83	2	5.25	173	0830	MW-23-3
2	1	✓	✓	✓	✓	✓	67.71	✓	62.48	✓	62.48	✓	67.71	21.6	1065	7.65	1	5.33	189	0900	MW-23-2
1	2	✓	✓	✓	✓	✓	67.69	✓	62.47	✓	62.47	✓	67.69								
1	1	✓	✓	✓	✓	✓	32.82	✓	28.11	✓	28.11	✓	32.82	21.1	1206	7.69	1	5.45	194	0935	MW-23-1

Comments: ms/215D @ MW-23-2
SB-1-091818
TB-1-091818

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-24
 SAMPLING DATE(S) 04/18/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 211.02
 ATM. PRESSURE (PSI): (Start) 14.11 (Finish) 14.13

PROBE TYPE Westbay
 SERIAL NO. FMS 2502
 PROJECT: JPL
 OPERATOR(S) T. Hoan
 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
1	1	✓	✓	✓	✓	✓	169.73	✓	170.48	✓	170.48	✓	169.73	21.2	250	8.40	2	5.05	-46	1045	MW-24-4
5	1	✓	✓	✓	✓	✓	218.18	✓	202.61	✓	202.61	✓	218.18	20.9	404	8.51	3	4.65	110	1120	MW-24-5
3	1	✓	✓	✓	✓	✓	113.10	✓	100.38	✓	100.38	✓	113.10	21.3	339	8.24	2	4.75	-69	1145	MW-24-3
2	1	✓	✓	✓	✓	✓	86.13	✓	73.56	✓	73.56	✓	86.13	21.8	652	8.29	3	4.99	148	1230	MW-24-2
1	2	✓	✓	✓	✓	✓	86.10	✓	73.55	✓	73.55	✓	86.10								
1	1	✓	✓	✓	✓	✓	45.33	✓	33.69	✓	33.69	✓	45.33	19.4	726	7.96	2	4.65	184	1315	MW-24-1
	2	✓	✓	✓	✓	✓	45.31	✓	33.70	✓	33.70	✓	45.31								
	3	✓	✓	✓	✓	✓	45.32	✓	33.72	✓	33.72	✓	45.32								
	4	✓	✓	✓	✓	✓	45.30	✓	33.71	✓	33.71	✓	45.30								

Comments: ms/msb @ MW-24-2

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-25
 SAMPLING DATE(S) 04/23/18
 LOCATION: JPL
 WATER LEVEL INSIDE CASING: 244.60
 ATM. PRESSURE (PSI): (Start) 14.16 (Finish) 14.19

PROBE TYPE Westbay
 SERIAL NO. EMS2502
 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 (ppm) <u>mg/L</u>	ORP (mv)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	222.18	✓	216.36	✓	216.36	✓	222.18	21.3	404	8.75	3	5.73	-59	1215	MW-25-5
4	1	✓	✓	✓	✓	✓	187.44	✓	182.39	✓	182.39	✓	187.44	22.4	823	8.47	2	4.83	141	1240	MW-25-4
3	1	✓	✓	✓	✓	✓	131.10	✓	126.62	✓	126.62	✓	131.10	22.7	829	8.35	2	4.96	190	1310	MW-25-3
2	1	✓	✓	✓	✓	✓	96.42	✓	91.92	✓	91.92	✓	96.42	24.1	770	8.29	3	5.09	203	1340	MW-25-2
	2	✓	✓	✓	✓	✓	96.40	✓	91.90	✓	91.90	✓	96.40								
1	1	✓	✓	✓	✓	✓	68.17	✓	63.55	✓	63.55	✓	68.17	23.6	955	7.90	2	5.50	215	1430	MW-25-1

Comments: mv/msd @ MW-25-2

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-26
 SAMPLING DATE(S) 09/24/18
 LOCATION: _____
 WATER LEVEL INSIDE CASING: 65.55
 ATM. PRESSURE (PSI): (Start) 14.05 (Finish) 14.06

PROBE TYPE Westbay
 SERIAL NO. EMS2502
 PROJECT: JPL
 OPERATOR(S) Ji 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 (ψ psi)	Close Valve/ Shoe In/ Arm In	Locate Port/ Arm Out/ Land Probe	Pressure in MP Casing (ψ psi)	Shoe Out	Port Pressure (ψ psi)	Open Valve	Port Pressure (ψ psi)	Close Valve/ Shoe In	Pressure in MP Casing (ψ psi)	Sample Temp ($^{\circ}$ C)	SC (μ S/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (ppm) <i>mg/L</i>	ORP (mv)	Sample Time	Sample ID
2	1	✓	✓	✓	✓	✓	81.74	✓	56.94	✓	56.94	✓	81.74	23.7	722	5.25	2	5.26	172	1220	MW-26-2
	2	✓	✓	✓	✓	✓	81.70	✓	56.93	✓	56.93	✓	81.70								
1	1	✓	✓	✓	✓	✓	47.87	✓	21.27	✓	21.27	✓	47.87	22.5	970	7.93	3	5.53	166	1300	MW-26-1
	2	✓	✓	✓	✓	✓	47.83	✓	21.23	✓	21.23	✓	47.83								
	3	✓	✓	✓	✓	✓	47.70	✓	21.24	✓	21.24	✓	47.70								

Comments: POP-4-2018 @ MW-26-1 @ 1310