

## **ATTACHMENT 4: FIELD LOGS**

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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 3<sup>rd</sup> Quarter 2018 sampling event was conducted by Blaine Tech Services, Inc.

Note: During the third quarter 2018, the shallow standpipe well MW-13 was inaccessible due to ongoing construction activities and the uppermost sampling port (i.e., Screen 1) in multi-port monitoring wells MW-12, MW-14, MW-20, and MW-21 were dry and could not be sampled.

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: mw-3  
 SAMPLING DATE(S) 07/25/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 173.14  
 ATM. PRESSURE (PSI): (Start) 14.09 (Finish) 14.11

PROBE TYPE Westbay  
 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)	ORP (mv)	Sample Time
4	1	✓	✓	✓	✓	✓	185.75	✓	185.04	✓	185.04	✓	185.75	20.8	652	6.74	16	6.09	223	0735	mw-3-4
3	1	✓	✓	✓	✓	✓	93.06	✓	93.37	✓	93.37	✓	93.06	20.6	565	7.08	4	6.31	197	0800	mw-3-3
2	1	✓	✓	✓	✓	✓	52.03	✓	53.32	✓	53.32	✓	52.03	20.5	533	7.24	2	6.10	174	0830	<del>mw-3-4</del> <sup>mw</sup> mw-3-2

Comments: TB-3-072518 @ 0700

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

WELL ID: MW-4  
 SAMPLING DATE(S) 07/31/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 149.97  
 ATM. PRESSURE (PSI): (Start) 14.07 (Finish) 14.09

PROBE TYPE Westbay  
 SERIAL NO. EIMS 2502  
 PROJECT: JPL  
 OPERATOR(S) J. Hoag  
 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
3	1	✓	✓	✓	✓	✓	93.56	✓	93.09	✓	93.09	✓	93.56	22.8	1048	7.88	17	7.09	-99	1130	MW-4-3
2	1	✓	✓	✓	✓	✓	57.74	✓	57.72	✓	57.72	✓	57.74	24.0	1166	7.71	4	6.83	178	1215	MW-4-2
1	1	✓	✓	✓	✓	✓	18.37	✓	22.84	✓	22.84	✓	18.37	24.1	508	8.14	3	6.73	174	1245	MW-4-1
	2	✓	✓	✓	✓	✓	18.33	✓	22.82	✓	22.82	✓	18.33								

Comments: #6-073118 @ 1310

## WELL MONITORING DATA SHEET

Project #: 180720-1111	Site: JPL
Sampler: AH	Date: 08/02/18
Well I.D.: MW-5	Well Diameter: 2 3 (4) 6 8
Total Well Depth (TD): 140.00	Depth to Water (DTW): 119.69
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]: 123.75	

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Water  
 2" Rediflo pump Dect.  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: ( )

26PM

$$\frac{13.3 \text{ (Gals.)} \times 3 \text{ Specified Volumes}}{1 \text{ Case Volume}} = 39.9 \text{ Gals. Calculated Volume}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 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
0705	68.3	6.67	549	3	1.31	161	8	119.75
0708	68.5	6.60	386	2	1.05	153	14	119.77
0711	67.5	6.82	379	1	0.90	144	20	119.78
0714	67.3	6.81	377	1	0.92	142	26	119.78
0717	67.3	6.81	375	1	0.90	140	32	119.78
0721	67.4	6.80	373	1	0.91	137	40	119.78

Did well dewater? Yes  No  Gallons actually evacuated: 40

Sampling Date: 08/02/18 Sampling Time: 0722 Depth to Water: 119.78

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

Analyzed for: Other: See C.O.C

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-5-3218 @

FB I.D. (if applicable): @ Time Analyzed for: 0732

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 #: 180720-HH1	Site: JPL
Sampler: HH	Date: 08/02/18
Well I.D.: MW-6	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 245.00	Depth to Water (DTW): 231.13
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]: 233.90	

Purge Method: Bailer      Watera  
 Disposable Bailer      2" Rediflo pump  
 Positive Air Displacement      Extraction Pump  
 Electric Submersible      Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

260m

9.1 (Gals.) X 3 = 27.3 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 <sup>2</sup> * 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
0833	71.9	7.26	1093	32	3.09	165	6	231.20
0835	70.6	7.20	1109	21	2.90	150	10	231.45
0837	72.1	7.21	1113	17	2.66	139	14	231.53
0840	72.3	7.21	1116	15	2.60	135	20	231.56
0842	72.2	7.19	1114	13	2.53	133	24	231.58
0844	72.1	7.18	1113	13	2.51	131	28	231.59

Did well dewater? Yes  No  Gallons actually evacuated: 28

Sampling Date: 08/02/18      Sampling Time: 0845      Depth to Water: 231.59

Sample I.D.: MW-6      Laboratory: BC

Analyzed for: See C.O.C      Other: \_\_\_\_\_

EB I.D. (if applicable): @ Time      Duplicate I.D. (if applicable): PUD-6-3Q18 @

FB I.D. (if applicable): @ Time      Analyzed for: 0855

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>180720-HH1</u>	Site: <u>JPL</u>
Sampler: <u>HH</u>	Date: <u>08/02/18</u>
Well I.D.: <u>MM-7</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>267.52</u>	Depth to Water (DTW): <u>258.28</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	Flow Cell Type: <u>YSI 556</u>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>260.12</u>	

Purge Method:                      Bailer                      Water  
                                          Disposable Bailer                      2" Rediflo pump Ded  
                                          Positive Air Displacement                      Extraction Pump  
                                          Electric Submersible                      Other \_\_\_\_\_

Sampling Method:                      Bailer  
                                          Disposable Bailer  
                                          Extraction Port  
                                          Dedicated Tubing  
                                          Other: \_\_\_\_\_

16PM

<u>6.1</u> (Gals.) X	<u>3</u>	=	<u>18.3</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 <sup>2</sup> * 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
1110	77.2	7.75	796	119	4.83	173	3	258.39
1113	77.1	7.73	730	94	4.75	139	6	258.46
1116	76.4	7.70	724	60	4.73	125	9	258.49
1119	76.2	7.65	722	41	4.70	122	12	258.51
1122	76.1	7.63	719	39	4.68	121	15	258.52
1126	75.9	7.62	716	38	4.65	119	19	258.53

Did well dewater?                      Yes                      (No)                      Gallons actually evacuated: 19

Sampling Date: ~~1127~~ 08/02/18                      Sampling Time: 1127                      Depth to Water: 258.53

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

Analyzed for: Seel. 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>180720-HA1</u>	Site: <u>JPL</u>
Sampler: <u>HA</u>	Date: <u>08/02/18</u>
Well I.D.: <u>MW-8</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth (TD): <u>205.00</u>	Depth to Water (DTW): <u>184.50</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	Flow Cell Type <span style="float: right;">YSI 556</span>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>188.60</u>	

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

Other: \_\_\_\_\_

260m

<u>13.4</u> (Gals.) X	<u>3</u>	= <u>40.2</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 <sup>2</sup> * 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
<u>0928</u>	<u>71.8</u>	<u>7.53</u>	<u>556</u>	<u>2</u>	<u>5.04</u>	<u>156</u>	<u>6</u>	<u>184.83</u>
<u>0932</u>	<u>72.3</u>	<u>7.45</u>	<u>631</u>	<u>2</u>	<u>4.85</u>	<u>133</u>	<u>14</u>	<u>184.95</u>
<u>0935</u>	<u>72.5</u>	<u>7.40</u>	<u>635</u>	<u>2</u>	<u>4.73</u>	<u>120</u>	<u>20</u>	<u>185.03</u>
<u>0939</u>	<u>72.3</u>	<u>7.39</u>	<u>633</u>	<u>1</u>	<u>4.65</u>	<u>117</u>	<u>28</u>	<u>185.06</u>
<u>0941</u>	<u>72.0</u>	<u>7.37</u>	<u>631</u>	<u>1</u>	<u>4.64</u>	<u>115</u>	<u>32</u>	<u>185.08</u>
<u>0946</u>	<u>72.0</u>	<u>7.35</u>	<u>630</u>	<u>1</u>	<u>4.62</u>	<u>114</u>	<u>42</u>	<u>185.09</u>

Did well dewater?                      Yes                      (No)                      Gallons actually evacuated: 42

Sampling Date: 08/02/18                      Sampling Time: 0947                      Depth to Water: 185.09

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

Analyzed for: See C.O.C                      Other: \_\_\_\_\_

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time                      Duplicate I.D. (if applicable): DUP-7-3Q18 @ \_\_\_\_\_

FB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time                      Analyzed for: \_\_\_\_\_ 0957

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 #: 180720-H1A1	Site: JPL
Sampler: HH	Date: 08/02/18
Well I.D.: MW-10	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): 155.00	Depth to Water (DTW): 135.35
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]: 139.28	

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Water  
2" Rediflo pump Ded.  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
Dedicated Tubing  
 Other: \_\_\_\_\_

26PM

12.18 (Gals.) X	3	=	38.4	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 <sup>2</sup> * 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
1010	72.5	7.28	745	6	1.34	192	6	135.65
1013	72.8	7.25	756	4	1.10	175	12	135.89
1016	72.9	7.21	773	4	1.06	163	18	135.95
1019	72.6	7.19	777	3	1.05	160	24	135.97
1022	72.5	7.17	779	3	1.02	157	30	135.99
1027	72.3	7.16	783	3	0.99	154	40	136.01

Did well dewater? Yes  No  Gallons actually evacuated: 40

Sampling Date: 08/02/18 Sampling Time: 1028 Depth to Water: 136.01

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

Analyzed for: Secc.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:



WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-11  
 SAMPLING DATE(S): 08/01/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 166.13  
 ATM. PRESSURE (PSI): (Start) 14.05 (Finish) 14.07

PROBE TYPE: West Hg  
 SERIAL NO.: FMS 2502  
 PROJECT: JPL  
 OPERATOR(S): J. Hony  
 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 (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
9	1	✓	✓	✓	✓	✓	163.51	✓	161.53	✓	161.53	✓	163.51	20.4	267	7.06	4	6.73 mg/L	-71	0730	MW-11-4
3	1	✓	✓	✓	✓	✓	122.58	✓	117.80	✓	117.80	✓	122.58	20.6	409	7.26	2	6.83	120	0805	MW-11-3
2	1	✓	✓	✓	✓	✓	48.69	✓	47.59	✓	47.59	✓	48.69	21.2	481	7.60	2	6.95	-15	0830	MW-11-2
	2	✓	✓	✓	✓	✓	48.65	✓	47.56	✓	47.56	✓	48.65								
1	1	✓	✓	✓	✓	✓	14.07	✓	24.06	✓	24.06	✓	14.07	24.6	668	7.73	1	7.05	141	0930	MW-11-1
	2	✓	✓	✓	✓	✓	14.06	✓	24.05	✓	24.05	✓	14.06								

Comments: TB-0-080118 @ 0700  
at 7

MS/MS p @ MW-11-2

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-12  
 SAMPLING DATE(S) 08/01/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 158.55  
 ATM. PRESSURE (PSI): (Start) 14.08 (Finish) 14.10

PROBE TYPE West Bay  
 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 (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	✓	✓	✓	✓	✓	188.04	✓	173.30	✓	173.30	✓	188.04	25.1	470	8.08	1	6.75	145	1030	MW-12-5	
4	1	✓	✓	✓	✓	✓	138.72	✓	132.70	✓	132.70	✓	138.72	21.6	493	8.16	1	6.86	199	1105	MW-12-4	
3	1	✓	✓	✓	✓	✓	90.65	✓	84.74	✓	84.74	✓	90.65	21.9	445	8.29	1	7.31	194	1140	MW-12-3	
	2	✓	✓	✓	✓	✓	90.61	✓	84.72	✓	84.72	✓	90.61									
2	1	✓	✓	✓	✓	✓	55.56	✓	50.99	✓	50.99	✓	55.56	22.0	526	7.93	10	7.13	158	1230	MW-12-2	
1	1	✓	✓	✓	✓	✓	14.07	✓	14.05	✓	14.05	✓	14.07	Part is Dry - No Sample Taken						<del>MW-12-1</del>		

Comments: 105/12511 @ MW-12-3

EB-7-080118 @ 1300

## WELL MONITORING DATA SHEET

Project #: <u>180720-HH1</u>	Site: <u>JPL</u>
Sampler: <u>AA</u>	Date: <u>08/02/18</u>
Well I.D.: <u>MW-13</u>	Well Diameter: 2 3 4 6 8 <u>    </u>
Total Well Depth (TD): <u>    </u>	Depth to Water (DTW): <u>    </u>
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                                      Disposable Bailer  
                                          Positive Air Displacement                                      Extraction Pump                                      Extraction Port  
                                          Electric Submersible                                      Other \_\_\_\_\_                                      Dedicated Tubing

Other: \_\_\_\_\_

	(Gals.) X		=		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 <sup>2</sup> * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or μS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
<u>-Unable to access due to construction-</u>								
<u>-No Sample Taken-</u>								

Did well dewater?	Yes	No	Gallons actually evacuated:
Sampling Date:	Sampling Time:	Depth to Water:	
Sample I.D.:	Laboratory:		
Analyzed for:	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) 07/24/18  
 LOCATION: JPL Penting Lot  
 WATER LEVEL INSIDE CASING: 192.26  
 ATM. PRESSURE (PSI): (Start) 14.01 (Finish) 14.03

PROBE TYPE Westbay  
 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)	ORP (mv)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	170.39	✓	155.26	✓	155.26	✓	170.39	20.6	347	7.04	1	6.11	205	0730	MW-14-5	
4	1	✓	✓	✓	✓	✓	132.79	✓	119.04	✓	119.04	✓	132.79	21.6	697	7.00	2	6.45	221	0750	MW-14-4	
3	1	✓	✓	✓	✓	✓	101.26	✓	86.98	✓	86.98	✓	101.26	22.7	1115	7.45	1	6.73	180	0830	MW-14-3	
	2	✓	✓	✓	✓	✓	101.23	✓	86.97	✓	86.97	✓	101.23									
2	1	✓	✓	✓	✓	✓	55.75	✓	41.54	✓	41.54	✓	55.75	23.9	1212	7.54	3	5.96	163	0905	MW-14-2	
1	1	✓	✓	✓	✓	✓	21.62	✓	14.18	✓	14.18	✓	21.62	Port is Dry - No Sample Taken								

Comments: TB-2-072418 @ 0700

MC/MFP @ MW-14-3

## WELL MONITORING DATA SHEET

Project #: <u>180720-1111</u>	Site: <u>JPL</u>
Sampler: <u>HH</u>	Date: <u>08/02/18</u>
Well I.D.: <u>MW-15</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>74.00</u>	Depth to Water (DTW): <u>36.14</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>43.71</u>	

Purge Method: Bailer  
 Disposable Bailer  
 Positive Air Displacement  
 Electric Submersible

Water  
2" Rediflo pump Pacl.  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method: Bailer  
 Disposable Bailer  
 Extraction Port  
 Dedicated Tubing  
 Other: \_\_\_\_\_

36 PM

<u>24.7</u> (Gals.) X	<u>3</u> Specified Volumes	<u>=</u>	<u>74.1</u> Gals. Calculated Volume
1 Case Volume			

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 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
<u>0744</u>	<u>66.7</u>	<u>7.17</u>	<u>563</u>	<u>9</u>	<u>1.26</u>	<u>134</u>	<del>12</del>	<u>36.22</u>
<u>0748</u>	<u>64.6</u>	<u>7.31</u>	<u>561</u>	<u>7</u>	<u>1.30</u>	<u>125</u>	<del>24</del>	<u>36.25</u>
<u>0752</u>	<u>64.5</u>	<u>7.34</u>	<u>560</u>	<u>6</u>	<u>1.33</u>	<u>122</u>	<del>36</del>	<u>36.29</u>
<u>0756</u>	<u>64.9</u>	<u>7.35</u>	<u>573</u>	<u>5</u>	<u>1.32</u>	<u>117</u>	<del>48</del>	<u>36.38</u>
<u>0800</u>	<u>65.1</u>	<u>7.35</u>	<u>575</u>	<u>5</u>	<u>1.34</u>	<u>116</u>	<u>60</u>	<u>36.40</u>
<u>0805</u>	<u>65.2</u>	<u>7.36</u>	<u>578</u>	<u>5</u>	<u>1.33</u>	<u>114</u>	<u>75</u>	<u>36.41</u>

Did well dewater? Yes  No  Gallons actually evacuated: 75

Sampling Date: 08/02/18 Sampling Time: 0806 Depth to Water: 36.41

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 #: <u>180720-AA1</u>	Site: <u>JPL</u>
Sampler: <u>HA</u>	Date: <u>08/02/18</u>
Well I.D.: <u>MW-16</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth (TD): <u>284.73</u>	Depth to Water (DTW): <u>279.45</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	Flow Cell Type <span style="float: right;">YSI 556</span>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>    </u>	

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: \_\_\_\_\_

$$\frac{\text{--- (Gals.) X ---}}{\text{Specified Volumes}} = \frac{\text{---}}{\text{Calculated Volume}} \text{ Gals.}$$

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 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
<u>— Grab Sample Taken —</u>								
<u>1050</u>	<u>78.1</u>	<u>7.78</u>	<u>741</u>	<u>21000</u>	<u>2.05</u>	<u>165</u>	<u>    </u>	<u>    </u>

Did well dewater?          Yes           No          Gallons actually evacuated:     

Sampling Date: 08/02/18          Sampling Time: 1050          Depth to Water: 279.45

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

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: WJ MW-17  
 SAMPLING DATE(S): 07/30/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 208.06  
 ATM. PRESSURE (PSI): (Start) 14.07 (Finish) 14.08

PROBE TYPE: Westbay  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL  
 OPERATOR(S): T. Adams  
 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) <u>Mg/L</u>	ORP (mv)	Sample Time	Sample ID
4	1	✓	✓	✓	✓	✓	178.56	✓	144.84	✓	144.84	✓	178.56	26.1	751	7.76	5	6.96	120	1200	MW-17-4
	2	✓	✓	✓	✓	✓	178.44	✓	144.83	✓	144.83	✓	178.44								
3	1	✓	✓	✓	✓	✓	129.35	✓	102.46	✓	102.46	✓	129.35	24.5	914	7.96	3	6.43	151	1250	MW-17-3
2	1	✓	✓	✓	✓	✓	86.69	✓	63.46	✓	63.46	✓	86.69	24.3	637	8.04	13	6.73	142	1320	MW-17-2

Comments: INS/MSP @ MW-17-4

FB-5-073018 @ 1330

SB-2-073018 @ 1340

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-18  
 SAMPLING DATE(S): 07/25/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 293.83  
 ATM. PRESSURE (PSI): (Start) 14.02 (Finish) 14.04

PROBE TYPE: Westbay  
 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 (± 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	✓	✓	✓	✓	✓	188.57	✓	174.12	✓	174.12	✓	188.57	22.6	266	8.67	2	6.77	-45	0920	MW-18-5
4	1	✓	✓	✓	✓	✓	136.28	✓	126.12	✓	126.12	✓	136.28	23.5	403	8.09	2	6.85	143	0950	MW-18-4
3	1	✓	✓	✓	✓	✓	75.61	✓	71.54	✓	71.54	✓	75.61	23.2	514	7.99	1	6.73	145	1015	MW-18-3
2	1	✓	✓	✓	✓	✓	35.17	✓	33.38	✓	33.38	✓	34.37	24.9	519	7.84	2	6.25	143	1045	MW-18-2
							ATM 34.37														

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-19  
 SAMPLING DATE(S): 07/23/18  
 LOCATION: Pajonera Water Plant  
 WATER LEVEL INSIDE CASING: 139.66  
 ATM. PRESSURE (PSI): (Start) 14.04 (Finish) 14.07

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

Port Number	Run Number	Probe to Top Collar Arm out/ Land Probe	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)	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	✓	✓	✓	✓	✓	171.26	✓	133.81	✓	133.81	✓	171.26	26.9	667	7.07	3	ms/l 6.31	219	1140	MW-19-5
4	1	✓	✓	✓	✓	✓	147.45	✓	110.85	✓	110.85	✓	147.45	25.6	649	7.61	2	6.59	227	1220	MW-19-4
3	1	✓	✓	✓	✓	✓	124.91	✓	95.20	✓	95.20	✓	124.91	27.3	809	7.60	4	6.44	200	1235	MW-19-3
	2	✓	✓	✓	✓	✓	124.88	✓	95.18	✓	95.18	✓	124.88								
2	1	✓	✓	✓	✓	✓	90.98	✓	61.66	✓	61.66	✓	90.98	24.3	1115	7.62	3	6.05	176	1315	MW-19-2
1	1	✓	✓	✓	✓	✓	59.77	✓	32.12	✓	32.12	✓	59.77	27.1	602	7.83	3	6.73	218	1345	MW-19-1

Comments: ROP-1-072318 @ MW-19-3 @ 1245

EB-1-072318 @ 1900

SB-1-072318 @ 1416

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-20  
 SAMPLING DATE(S): 07/23/18  
 LOCATION: Church Parking Lot  
 WATER LEVEL INSIDE CASING: 239.83  
 ATM. PRESSURE (PSI): (Start) 14.06 (Finish) 14.08

PROBE TYPE: Use box  
 SERIAL NO.: FMS2502  
 PROJECT: JPL  
 OPERATOR(S): J. 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 (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
5	1	✓	✓	✓	✓	✓	306.07	✓	303.34	✓	306.07	20.4	297	7.45	6	4.02	-37	0810	MW-20-5	
4	1	✓	✓	✓	✓	✓	218.70	✓	204.03	✓	218.70	22.4	313	8.51	3	6.81	-121	0840	MW-20-4	
3	1	✓	✓	✓	✓	✓	159.15	✓	146.51	✓	159.15	22.0	323	8.34	3	6.33	-135	0915	MW-20-3	
2	1	✓	✓	✓	✓	✓	85.19	✓	79.10	✓	85.19	22.4	613	7.54	3	6.45	136	0940	MW-20-2	
	2	✓	✓	✓	✓	✓	85.16	✓	79.09	✓	85.16									
1	1	✓	✓	✓	✓	✓	14.09	✓	14.14	✓	14.09									<del>MW-20-1</del>

Comments: TB-1-072319 @ 0700

MS/MSD @ MW-20-2

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-21  
 SAMPLING DATE(S): 07/26/18  
 LOCATION: SPL  
 WATER LEVEL INSIDE CASING: 115.80  
 ATM. PRESSURE (PSI): (Start) 14.10 (Finish) 14.12

PROBE TYPE: Westbay  
 SERIAL NO.: EM52502  
 PROJECT: SPL  
 OPERATOR(S): T. Horen  
 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 Pressure (psi)	Close Valve / Shoe In	Pressure in MP Casing (psi)	Sample Temp (°C)	SC (µS/cm)	pH	Turbidity (NTU)	Dissolved Oxygen (mg/L)	ORP (mv)	Sample Time	Sample ID		
5	1	✓	✓	✓	✓	✓	✓	130.14	✓	130.65	✓	130.65	✓	130.14	24.3	825	7.95	3	6.46	176	1045	MW-21-5	
4	1	✓	✓	✓	✓	✓	✓	103.55	✓	103.82	✓	103.52	✓	103.55	22.1	909	7.65	2	5.67	133	1020	MW-21-4	
3	1	✓	✓	✓	✓	✓	✓	73.49	✓	73.99	✓	73.99	✓	73.49	25.6	1239	7.56	2	6.73	161	1115	MW-21-3	
	2	✓	✓	✓	✓	✓	✓	73.41	✓	73.98	✓	73.98	✓	73.41									
2	1	✓	✓	✓	✓	✓	✓	39.04	✓	39.95	✓	39.95	✓	39.04	27.3	1366	7.79	2	6.31	152	1200	MW-21-2	
1	1	✓	✓	✓	✓	✓	✓	14.09	✓	14.12	✓	14.12	✓	14.09	- Port is Dry - No Sample Taken -					<del>MW-21-1</del>			

Comments: MS/MSD @ MW-21-3 @ 114  
FB-4-0726/18 @ 1220

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-22  
 SAMPLING DATE(S) 07/26/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 215.94  
 ATM. PRESSURE (PSI): (Start) 14.05 (Finish) 14.07

PROBE TYPE WLS Probe  
 SERIAL NO. EWS 8502  
 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) <i>msl</i>	ORP (mv)	Sample Time
3	1	✓	✓	✓	✓	✓	91.93	✓	86.52	✓	86.52	✓	91.93	21.4	452	6.80	3	6.33	240	0800	MW-22-3
2	1	✓	✓	✓	✓	✓	65.62	✓	60.44	✓	60.44	✓	65.62	21.5	622	7.16	2	6.27	263	0830	MW-22-2
1	1	✓	✓	✓	✓	✓	28.66	✓	24.77	✓	24.77	✓	28.66	21.6	1198	7.40	2	6.05	268	0900	MW-22-1
	2	✓	✓	✓	✓	✓	28.55	✓	24.76	✓	24.76	✓	28.55								

Comments: TB-4-072618@0700

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-23  
 SAMPLING DATE(S) 07/31/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 138.76  
 ATM. PRESSURE (PSI): (Start) 19.08 (Finish) 19.09

PROBE TYPE Clus Hwy  
 SERIAL NO. EVS 2502  
 PROJECT: JPL  
 OPERATOR(S) T. Hoary  
 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)	ORP (mv)	Sample Time	Sample ID
4	1	✓	✓	✓	✓	✓	148.49	✓	135.06	✓	135.06	✓	148.49	21.3	454	6.77	2	6.79	205	0745	MW-23-4
3	1	✓	✓	✓	✓	✓	93.85	✓	83.72	✓	83.72	✓	93.85	21.8	545	7.04	2	6.43	200	0810	MW-23-3
2	1	✓	✓	✓	✓	✓	65.89	✓	55.69	✓	55.69	✓	65.89	23.5	1133	7.30	1	6.85	202	0850	MW-23-2
1	1	✓	✓	✓	✓	✓	30.97	✓	22.58	✓	22.58	✓	30.97	24.3	1221	7.60	1	7.10	187	0930	MW-23-1
	2	✓	✓	✓	✓	✓	30.94	✓	22.55	✓	22.55	✓	30.94								
	3	✓	✓	✓	✓	✓	30.85	✓	22.52	✓	22.52	✓	30.85								

Comments: TP-6-073118 @ 0700

POP-4-3 & 18 @ MW-23-1 @ 0940

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-24  
 SAMPLING DATE(S): 07/30/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 211.48  
 ATM. PRESSURE (PSI): (Start) 14.04 (Finish) 14.06

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 (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	✓	✓	✓	✓	✓	164.60	✓	141.32	✓	141.32	✓	164.60	22.8	225	7.47	3	5.31	-109	0745	MW-24-4
3	1	✓	✓	✓	✓	✓	113.14	✓	93.09	✓	93.09	✓	113.14	22.9	417	7.45	2	6.05	-124	0810	MW-24-3
2	1	✓	✓	✓	✓	✓	85.80	✓	66.67	✓	66.67	✓	85.80	23.3	587	7.39	2	6.34	108	0840	MW-24-2
1	1	✓	✓	✓	✓	✓	45.02	✓	28.50	✓	28.50	✓	45.02	17.3	756	7.64	6	6.70	14.7	0900	MW-24-1
	2	✓	✓	✓	✓	✓	45.00	✓	28.48	✓	28.48	✓	45.00								
	3	✓	✓	✓	✓	✓	44.98	✓	28.46	✓	28.46	✓	44.98								

Comments: TR-5-073018 @ 0700

DWP-3-3018 @ MW-24-1 @ 0910

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-25  
 SAMPLING DATE(S) 07/24/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 244.90  
 ATM. PRESSURE (PSI): (Start) 14.06 (Finish) 14.09

PROBE TYPE Water  
 SERIAL NO. EM52502  
 PROJECT: JPL  
 OPERATOR(S) J. Hoary  
 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 <del>(ppm)</del> mg/L	ORP (mv)	Sample Time	Sample ID
5	1	✓	✓	✓	✓	✓	221.95	✓	206.80	✓	206.80	✓	221.95	27.3	409	8.91	2	9.10	111	1045	MW-25-5
4	1	✓	✓	✓	✓	✓	187.26	✓	171.82	✓	171.82	✓	187.26	25.8	776	8.02	2	7.05	130	1115	MW-25-4
3	1	✓	✓	✓	✓	✓	130.97	✓	118.94	✓	118.94	✓	130.97	25.0	705	8.05	1	6.83	135	1140	MW-25-3
2	1	✓	✓	✓	✓	✓	96.34	✓	87.95	✓	87.95	✓	96.34	25.9	717	7.95	1	6.71	139	1205	MW-25-2
1	1	✓	✓	✓	✓	✓	67.95	✓	61.51	✓	61.51	✓	67.95	27.6	909	7.93	1	6.80	53	1240	MW-25-1
	2	✓	✓	✓	✓	✓	67.90	✓	61.50	✓	61.50	✓	67.90								

Comments: DUP-2-3018 @ MW-25-1 @ 1250

EB-2-072418 @ 1310

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-26  
 SAMPLING DATE(S): 07/25/18  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 64.82  
 ATM. PRESSURE (PSI): (Start) 14.10 (Finish) 14.12

PROBE TYPE: Wes Hop  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL  
 OPERATOR(S): J. Hayes  
 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
2	1	✓	✓	✓	✓	✓	82.04	✓	55.11	✓	55.11	✓	82.04	28.8	821	7.88	2	6.85	137	1220	MW-26-2
1	1	✓	✓	✓	✓	✓	47.59	✓	20.94	✓	20.94	✓	47.59	27.5	880	7.59	1	6.33	97	1245	MW-26-1
	2	✓	✓	✓	✓	✓	47.50	✓	20.92	✓	20.92	✓	47.50								

Comments: FB-3-0725 18 @ 1300