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 4th Quarter 2019 sampling event was conducted by Blaine Tech Services, Inc.

Note: During the fourth quarter 2019 the uppermost sampling ports (i.e., Screen 1) in the multi-port monitoring wells MW-12, MW-14, MW-18, MW-20 and MW-21 were dry and no samples were collected.

WELL MONITORING DATA SHEET

Project #: 191011-HH1	Site: JPL
Sampler: HH	Date: 10/24/19
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 90.00	Depth to Water (DTW): 31.47
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]: 43.17	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; 2" Rediflo pump; Extraction Pump; (Other) Peel RF2

Sampling Method: Bailer; Disposable Bailer; Extraction Port; 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	radius² * 0.163

38.1 (Gals.) X 3 = 114.3 Gals.
1 Case Volume; Specified Volumes; Calculated Volume

Time	Temp (°F or (°C))	pH	Cond. (mS/cm or (µS/cm))	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	PTW Observations
1133	19.7	7.05	829	6	2.26	184.9	20	31.78
1143	19.6	6.97	827	5	0.94	156.7	40	31.95
1153	19.5	6.95	829	4	0.90	135.1	60	32.71
1203	19.5	6.97	834	3	0.85	131.4	80	32.94
1213	19.6	6.93	836	3	0.82	129.6	100	32.96
1221	19.7	6.92	834	2	0.80	127.4	116	32.99

Did well dewater? Yes (No) Gallons actually evacuated: 116

Sampling Date: 10/24/19 Sampling Time: 1225 Depth to Water: 32.99

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

Analyzed for: Other: See C.O.C

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 #: 1910	Site: JPL
Sampler: KT	Date: 10.23.19
Well I.D.: MW-5	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 125.00	Depth to Water (DTW): 116.06
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]: 117.80	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, 2" Rediflo pump, Extraction Pump, Other_____ (8.94)

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

1 gpm

5.8 (Gals.) X 3 = 17.4 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	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
0849	61.0	7.94	273	4	1.89	99.9	3	116.13
0852	61.3	7.93	278	3	1.83	101.3	6	116.15
0855	61.4	7.92	281	2	1.79	104.5	9	116.16
0858	61.5	7.90	284	2	1.73	105.4	12	116.17
0901	61.4	7.89	285	1	1.69	106.3	15	116.17
0904	61.4	7.89	283	2	1.68	107.9	18	116.17

Did well dewater? Yes (No) Gallons actually evacuated: 18

Sampling Date: 10.23.19 Sampling Time: 0910 Depth to Water: 116.17

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

Analyzed for: SEE COC Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-0-4Q19 @ 0915

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 #: 1910	Site: JPL
Sampler: KT	Date: 10.23.19
Well I.D.: MW-6	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 239.00	Depth to Water (DTW): 229.24
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]: 231.19	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, (DED 2" Rediflo pump), Extraction Pump, Other______

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

(9.76) ~1 gpm MS MSD

6.3 (Gals.) X 3 = 19.0 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	radius² * 0.163

Time	Temp (°F) or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW ~~Observations~~
0705	70.1	7.34	1105	10	3.43	91.2	3	229.43
0708	70.4	7.30	1107	7	3.03	89.4	6	229.61
0711	71.5	7.28	1108	5	3.00	88.3	9	229.73
0714	71.7	7.25	1109	4	2.95	85.4	12	229.75
0717	71.7	7.23	1113	4	2.93	84.3	15	229.76
0721	71.7	7.23	1115	4	2.89	83.9	19	229.76

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

Sampling Date: 10.23.19 Sampling Time: 0730 Depth to Water: 229.80

Sample I.D.: MW-6 (MS/MSD) 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 #: 1910	Site: JPL
Sampler: KT	Date: 10.23.19
Well I.D.: MW-7	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 265.00	Depth to Water (DTW): 255.67
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]: 257.53	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, 2" Rediflo pump, Extraction Pump, Other ___, (9.33), Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ___

1 gpm

6.0 (Gals.) X 3 = 18.1 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
1212	75.6	7.31	714	21	1.91	87.5	3	~~257~~ 255.75
1215	78.3	7.47	717	13	1.82	84.3	6	255.80
1218	78.6	7.51	717	6	1.80	83.1	9	255.80
1221	78.6	7.52	716	5	1.78	81.6	12	255.80
1224	78.7	7.52	718	4	1.80	80.6	~~12~~ 15	255.80
1227	78.6	7.52	715	4	1.81	79.4	18.5	255.80

Did well dewater? Yes (No) Gallons actually evacuated: 18.5

Sampling Date: 10.23.19 Sampling Time: 1230 Depth to Water: 255.80

Sample I.D.: MW-7 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 #: 1910	Site: JPL
Sampler: KT	Date: 10-23-19
Well I.D.: MW-8	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 195.00	Depth to Water (DTW): 181.60
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]: 184.28	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; (DED) 2" Rediflo pump; Waterra Extraction Pump; Other ____ (13.40)

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

1 gpm

8.7 (Gals.) X 3 = 26.1 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	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW ~~Observations~~
1059	65.9	7.62	387	8	1.51	79.5	4.5	181.73
1104	65.8	7.61	389	5	1.49	83.9	9.0	181.77
1109	65.7	7.61	393	4	1.43	88.5	13.5	181.80
1114	65.7	7.61	394	3	1.40	89.4	18.0	181.81
1119	65.6	7.61	395	3	1.38	91.3	22.5	181.81
1124	65.6	7.60	397	3	1.35	92.4	27.0	181.81

Did well dewater? Yes (No) Gallons actually evacuated: 27.0

Sampling Date: 10-23-19 Sampling Time: 1130 Depth to Water: 181.81

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

Analyzed for: Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): DUP-7-4/19 @ 1135

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 #: 191011-HH1	Site: JPL
Sampler: HH	Date: 10/24/19
Well I.D.: MW-9	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 60.00	Depth to Water (DTW): 24.17
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]: 31.33	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; 2" Rediflo pump; Extraction Pump; (Other) Bed RFZ

Sampling Method: Bailer; Disposable Bailer; Extraction Port; (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	radius² * 0.163

23.3 (Gals.) X 3 = 69.9 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Time	Temp (°F or (°C))	pH	Cond. (mS/cm or (µS/cm))	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
1250	22.2	6.74	754	11	6.03	11.3	12	26.10
1256	20.1	6.83	762	8	5.73	5.9	24	26.45
1302	20.3	6.73	760	6	5.80	8.1	36	26.73
1308	20.2	6.69	765	4	5.75	8.3	48	26.85
1314	20.3	6.67	763	4	5.73	10.9	60	26.89
1319	20.5	6.65	761	3	5.71	11.1	70	26.90

Did well dewater? Yes (No) Gallons actually evacuated: 70

Sampling Date: 10/24/19 Sampling Time: 1325 Depth to Water: 26.90

Sample I.D.: MW-9 Laboratory: BC

Analyzed for: (Other: TPH-G, BTEX)

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 #: 1910	Site: JPL
Sampler: KT	Date: 10.23.19
Well I.D.: MW-10	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 145.00	Depth to Water (DTW): 132.10
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]: 134.68	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / ~~Waterra~~ / (2" Rediflo pump) / Extraction Pump / Other____ 12.9

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

1 Gpm

8.3 (Gals.) X 3 = 25.1 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	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	~~Observations~~ DTW
0757	68.0	7.68	407	10	2.98	79.4	4	132.19
0801	68.1	7.67	444	8	2.95	80.3	8	132.23
0805	68.1	7.65	451	6	2.88	83.6	12	132.25
0809	68.2	7.64	463	5	2.85	85.4	16	132.25
0813	68.3	7.63	465	4	2.83	88.3	20	132.25
0818	68.4	7.64	469	3	2.81	87.1	25.5	132.25

Did well dewater? Yes (No) Gallons actually evacuated: 25.5

Sampling Date: 10.23.19 Sampling Time: 0825 Depth to Water: 132.25

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

WELL MONITORING DATA SHEET

Project #: 19/011-HH1	Site: JPL
Sampler: HH	Date: 10/24/19
Well I.D.: MW-13	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): ~~220.00~~ 234.33	Depth to Water (DTW): 226.34
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, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, 2" Rediflo pump, ~~Extraction Pump~~, (Other) ~~Ded RFZ~~

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

— (Gals.) X — = — 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	radius² * 0.163

Time	Temp (°F or (°C))	pH	Cond. (mS/cm or (µS/cm))	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW Observations
	— No Purge Sample —							
	— water below pump intake —							
1605	19.4	6.29	852	93	3.73	98.9	—	

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

Sampling Date: 10/24/19 Sampling Time: 1605 Depth to Water: 226.34

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

Analyzed for: (Other): See C.O.C

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 #: 1910	Site: SPL
Sampler: KT	Date: 10.23.19
Well I.D.: MW-15	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 60.00	Depth to Water (DTW): 36.50
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]: 41.20	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; (DED 2" Rediflo pump); Extraction Pump; Other_____

23.50

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

2 gpm

15.2 (Gals.) X 3 = 45.8 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	radius² * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	DTW ~~Observations~~
0940	62.7	7.18	483	13	1.92	96.9	8	36.73
0944	62.7	7.19	485	9	1.84	98.4	16	36.75
0948	62.8	7.17	483	7	1.79	99.7	24	36.75
0952	62.8	7.16	485	5	1.74	99.5	3032	36.75
0956	62.7	7.15	486	4	1.70	101.2	38	36.75
1000	62.7	7.15	485	4	1.69	100.5	46	36.75

Did well dewater? Yes (No) Gallons actually evacuated: 46

Sampling Date: 10.23.19 Sampling Time: 1010 Depth to Water: 36.75

Sample I.D.: MW-15 (MS MSD) 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 #: 191011-HH1	Site: JPL
Sampler: HH	Date: 10/24/19
Well I.D.: MW-16	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 284.71	Depth to Water (DTW): 277.94
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]: 279.29	

Purge Method: Bailer; (Disposable Bailer); Positive Air Displacement; Electric Submersible; Waterra; 2" Rediflo pump; Extraction Pump; Other_____

Sampling Method: Bailer; (Disposable Bailer); Extraction Port; 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	radius² * 0.163

4.5 (Gals.) X 3 = 13.5 Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Time	Temp (°F or (°C))	pH	Cond. (mS/cm or (µS/cm))	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
1008	21.3	7.18	681	197	6.34	175.3	2.5	—
1011	21.6	7.45	675	331	6.31	166.4	5.0	—
1014	21.8	7.47	673	366	6.27	161.5	7.5	—
1017	21.4	7.44	672	622	6.25	158.6	10.0	—
1021	21.6	7.42	673	620	6.23	157.4	12.5	—
1025	21.7	7.47	671	629	6.20	153.5	14.0	—

Did well dewater? Yes (No) Gallons actually evacuated: 14

Sampling Date: 10/24/19 Sampling Time: 1030 Depth to Water: 278.11

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

Analyzed for: Other: Lead-C-C

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) 10/17/19
LOCATION: JPC
WATER LEVEL INSIDE CASING: 184.37
ATM. PRESSURE (PSI): (Start) 14.11 (Finish) 14.01

PROBE TYPE Westbay
SERIAL NO. EMS 2502
PROJECT: JPC
OPERATOR(S) T. 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 (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	✓	✓	✓	✓	✓	222.71	✓	226.22	✓	228.16	✓	222.71	17.9	605	6.98	152	5.61	176	0815	MW-3-5
4	1	✓	✓	✓	✓	✓	181.35	✓	187.30	✓	187.30	✓	181.37	18.7	565	7.12	206	7.44	127	0855	MW-3-4
3	1	✓	✓	✓	✓	✓	88.94	✓	95.61	✓	95.60	✓	88.93	19.2	575	7.30	22	9.52	100	0930	MW-3-3
	2	✓	✓	✓	✓	✓	88.41	✓	95.61	✓	95.62	✓	88.42								
2	1	✓	✓	✓	✓	✓	47.92	✓	56.03	✓	56.03	✓	47.92	20.2	531	7.24	4	6.10	111	1015	MW-3-2
1	1	✓	✓	✓	✓	✓	14.09	✓	24.96	✓	24.95	✓	14.12	21.0	421	7.70	7	3.31	115	1050	MW-3-1
	2	✓	✓	✓	✓	✓	14.04	✓	24.94	✓	24.96	✓	14.12								

Comments: TB-4-101719@0700

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-4
SAMPLING DATE(S) 10/21/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 54.35
ATM. PRESSURE (PSI): (Start) 14.11 (Finish) 14.10
15.80°C

PROBE TYPE EMS2502
SERIAL NO. EMS2502
PROJECT: JPL Pasadena
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	✓	✓	✓	✓	✓	174.97	✓	177.93	✓	177.92	✓	174.97	17.0	865	6.89	90	4.43	71	0735	MW-4-5
4	1	✓	✓	✓	✓	✓	122.12	✓	125.55	✓	125.55	✓	122.12	18.4	817	7.10	12	4.02	-47	0810	MW-4-4
3	1	✓	✓	✓	✓	✓	91.53	✓	95.19	✓	95.17	✓	91.51	19.4	844	7.30	16	3.96	-91	0845	MW-4-3
2	1	✓	✓	✓	✓	✓	55.64	✓	59.90	✓	59.83	✓	55.65	21.1	995	7.17	4	7.92	59	0915	MW-4-2
1	1	✓	✓	✓	✓	✓	16.21	✓	24.20	✓	22.54	✓	16.33	18.16	330	7.59	4	5.88	45	0940	MW-4-1
	2	✓	✓	✓	✓	✓	14.19	✓	24.21	✓	24.20	✓	14.19								

Comments:

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-11
SAMPLING DATE(S) 10/22/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 182.04'
ATM. PRESSURE (PSI): (Start) 14.14 (Finish) 14.13
Temp: 23.93°C 19.84

PROBE TYPE Westbay Sampler 0-500 psi
SERIAL NO. FMS2-502
PROJECT: JPL Pasadena
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/ ~~Open 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
[redacted]																					
1	1	✓	✓	✓	✓	✓	14.21	✓	23.91	✓	23.90	✓	14.21	20.4	766	6.59	2	5.55	208	0800	MW-11-1
	2	✓	✓	✓	✓	✓	14.17	✓	23.87	✓	22.75	✓	14.21								
5	1	✓	✓	✓	✓	✓	214.45	✓	204.06	✓	204.00	✓	214.46	20.8	347	7.14	2	5.38	187	0900	MW-11-5
	2	✓	✓	✓	✓	✓	214.39	✓	204.05	✓	204.02	✓	214.39								
4	1	✓	✓	✓	✓	✓	166.03	✓	163.72	✓	163.66	✓	165.85	24.5	280	7.86	1	4.90	-167	0940	MW-11-4
3	1	✓	✓	✓	✓	✓	124.86	✓	120.97	✓	120.97	✓	124.86	23.2	389	7.68	4	5.55	-9	1015	MW-11-3
2	1	✓	✓	✓	✓	✓	51.16	✓	50.40	✓	50.37	✓	51.00	23.9	453	7.63	2	4.54	-65	1100	MW-11-2
	2	✓	✓	✓	✓	✓	51.10	✓	50.39	✓	50.39	✓	51.10								

Comments:

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-12
SAMPLING DATE(S) 10/21/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 132.17'
ATM. PRESSURE (PSI): (Start) 14.13 (Finish) 14.08
18.22°C 18.58°C

PROBE TYPE Westbay Sampler 0-500 psi
SERIAL NO. EMS 2502
PROJECT: JPL Pasadena
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/ Close Vacuum~~	Open Valve/ Apply Vacuum (6 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	✓	✓	✓	✓	✓	200.11	✓	173.12	✓	173.10	✓	200.08	21.4	440	7.84	4	7.74	88	1120	MW-12-5
4	1	✓	✓	✓	✓	✓	151.27	✓	134.64	✓	134.62	✓	151.25	20.5	485	7.92	2	5.29	93	1200	MW-12-4
3	1	✓	✓	✓	✓	✓	101.96	✓	87.82	✓	87.89	✓	101.96	20.4	467	7.93	2	5.32	98	1230	MW-12-3
2	1	✓	✓	✓	✓	✓	67.00	✓	54.04	✓	54.08	✓	67.00	20.8	582	7.73	8	5.69	78	1300	MW-12-2
1	1	✓	✓	✓	✓	✓	~~22.54~~ 21.42	✓	14.16	✓	14.10	✓	21.38	– Port is Dry			No Sample Taken			~~1330~~	~~MW-12-1~~

Comments:

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-14
SAMPLING DATE(S) 10/15/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 142.95
ATM. PRESSURE (PSI): (Start) 14.07 (Finish) 14.09

PROBE TYPE Westbay
SERIAL NO. EMS 2302
PROJECT: JPL
OPERATOR(S) T. Hocey
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	✓	✓	✓	✓	✓	170.21	✓	155.56	✓	155.56	✓	170.21	17.0	528	7.19	2	5.33	180	0745	MW-14-5
4	1	✓	✓	✓	✓	✓	133.29	✓	119.34	✓	119.34	✓	133.29	18.8	685	7.13	3	6.02	131	0820	MW-14-4
3	1	✓	✓	✓	✓	✓	101.35	✓	87.29	✓	87.29	✓	101.35	20.9	1127	7.06	2	6.25	123	0850	MW-14-3
2	1	✓	✓	✓	✓	✓	55.45	✓	41.84	✓	41.84	✓	55.45	21.2	1255	7.12	2	6.04	145	0930	MW-14-2
1	1	✓	✓	✓	✓	✓	24.65	✓	14.13	✓	14.13	✓	24.65	- Port is Dry - No Sample Taken							

Comments: FB-2-10151@0700

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-17
SAMPLING DATE(S) 10/17/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 208.29
ATM. PRESSURE (PSI): (Start) 14.01 (Finish) 14.04

PROBE TYPE Westbay Sampler 0-500 psi
SERIAL NO. EMS 2502'
PROJECT: JPL Pasadena
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	✓	✓	✓	✓	✓	240.95	✓	201.51	✓	201.50	✓	240.94	20.9	647	7.70	14	5.76	118	1310	MW-17-5
4	1	✓	✓	✓	✓	✓	178.74	✓	144.99	✓	144.98	✓	178.73	20.6	699	7.74	2	6.96	129	1350	MW-17-4
3	1	✓	✓	✓	✓	✓	129.02	✓	105.30	✓	105.32	✓	129.03	21.2	790	7.86	3	5.98	111	1430	MW-17-3
2	1	✓	✓	✓	✓	✓	86.42	✓	66.62	✓	66.40	✓	86.44	21.2	524	7.85	2	5.72	108	1500	MW-17-2
1	1	✓	✓	✓	✓	✓	~~75.06~~	✓	20.72	✓	19.19	✓	34.20	20.7	334	7.79	2	7.16	141	1530	MW-17-1
	~~1~~						34.20														
	2	✓	✓	✓	✓	✓	33.78	✓	20.67	✓	20.09	✓	33.78								

Comments:

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-18
SAMPLING DATE(S) 10/23/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 293.04
ATM. PRESSURE (PSI): (Start) 13.95 (Finish) 13.94
Temp 20.82°C 22.78°C

PROBE TYPE Westbay Sampler 0-500 psi
SERIAL NO. EMS2502
PROJECT: JPL Pasadena
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	✓	✓	✓	✓	✓	188.81	✓	177.98	✓	177.91	✓	188.84	18.0	513	6.95	1	6.54	-63	0825	MW-18-5
4	1	✓	✓	✓	✓	✓	136.54	✓	128.85	✓	128.85	✓	136.57	19.8	418	6.86	2	6.77	169	0910	MW-18-4
3	1	✓	✓	✓	✓	✓	75.54	✓	74.49	✓	74.49	✓	75.54	20.7	524	6.95	1	8.33	176	0940	MW-18-3
2	1	✓	✓	✓	✓	✓	34.51	✓	36.12	✓	36.11	✓	34.51	22.4	462	7.08	2	7.68	155	1005	MW-18-2
	2	✓	✓	✓	✓	✓	34.46	✓	36.09	✓	36.08	✓	34.47							1015	DUP-7-4Q19
1	✓	✓	✓	✓	✓	✓	14.11	✓	14.11	✓	14.07	✓	14.06	— Port is Dry No Sample Taken							

Comments: _____

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-19
SAMPLING DATE(S) 10/14/19
LOCATION: SPL
WATER LEVEL INSIDE CASING: 140.45
ATM. PRESSURE (PSI): (Start) 14.02 (Finish) 14.04

PROBE TYPE Westbay
SERIAL NO. EMS2502
PROJECT: SPL
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	✓	✓	✓	✓	✓	171.06	✓	134.74	✓	134.74	✓	171.06	21.7	645	7.59	2	6.01	116	1240	MW-19-5
4	1	✓	✓	✓	✓	✓	147.63	✓	111.62	✓	111.62	✓	147.63	21.8	665	7.47	3	5.71	142	1310	MW-19-4
	2	✓	✓	✓	✓	✓	147.64	✓	111.65	✓	111.65	✓	147.64								
3	1	✓	✓	✓	✓	✓	124.99	✓	96.93	✓	96.93	✓	124.99	22.4	842	7.51	2	5.34	122	1405	MW-19-3
2	1	✓	✓	✓	✓	✓	91.18	✓	63.52	✓	63.52	✓	91.18	22.6	1143	7.45	3	5.85	126	1435	MW-19-2
1	1	✓	✓	✓	✓	✓	59.97	✓	34.20	✓	34.20	✓	59.97	23.0	502	7.85	2	5.39	101	1510	MW-19-1

Comments: DUP-2-101419 @ 1320
EB-1-101419 @ 1515
SB-1-101419 @ 1520

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-20
SAMPLING DATE(S) 10/14/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 239.83
ATM. PRESSURE (PSI): (Start) 14.06 (Finish) 14.10

PROBE TYPE Westbay
SERIAL NO. EMS250E
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	✓	✓	✓	✓	✓	305.01	✓	305.42	✓	305.42	✓	305.01	16.6	450	7.40	31	4.11	-97	0830	MW-20-5
	2	✓	✓	✓	✓	✓	303.32	✓	305.41	✓	305.41	✓	303.32								
4	1	✓	✓	✓	✓	✓	217.95	✓	207.01	✓	207.01	✓	217.95	21.1	322	8.35	27	5.35	-192	0930	MW-20-4
	2	✓	✓	✓	✓	✓	218.01	✓	207.03	✓	207.03	✓	218.01	~~21~~							
	3	✓	✓	✓	✓	✓	216.60	✓	207.03	✓	207.03	✓	216.60								
3	1	✓	✓	✓	✓	✓	158.75	✓	149.85	✓	149.85	✓	158.75	20.5	348	8.31	5	6.05	-187	1100	MW-20-3
2	1	✓	✓	✓	✓	✓	84.95	✓	81.70	✓	81.70	✓	84.95	21.2	756	7.61	4	5.63	65	1130	MW-20-2
1	1	✓	✓	✓	✓	✓	14.17	✓	14.16	✓	14.16	✓	14.17	- Port is Dry - No Sample Taken							

Comments: DUP-1-46219 @ 0940

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-21
SAMPLING DATE(S) 10/22/19
LOCATION: SPL
WATER LEVEL INSIDE CASING: 115.91
ATM. PRESSURE (PSI): (Start) 14.19 (Finish) 14.03

PROBE TYPE Westbay
SERIAL NO. EMS2802
PROJECT: SPL
OPERATOR(S) T. 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 (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	✓	✓	✓	✓	✓	130.13	✓	131.97	✓	131.97	✓	130.13	29.3	785	7.63	2	6.01	94	1245	MW-21-5
4	1	✓	✓	✓	✓	✓	104.34	✓	105.11	✓	105.13	✓	103.52	27.9	1070	7.56	2	5.18	110	1320	MW-21-4
	2	✓	✓	✓	✓	✓	102.96	✓	105.11	✓	105.13	✓	102.95							1330	DUP-5-4Q19
3	1	✓	✓	✓	✓	✓	73.28	✓	75.19	✓	75.22	✓	73.30	27.9	1238	7.55	1	4.35	118	1410	MW-21-3
2	1	✓	✓	✓	✓	✓	38.74	✓	40.94	✓	40.93	✓	38.75	27.4	9342	7.82	3	4.04	114	1435	MW-21-2
1	1	✓	✓	✓	✓	✓	14.07	✓	14.11	✓	14.11	✓	14.07	Port is Dry - No Sample Taken						—	—

Comments:

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-22
SAMPLING DATE(S) 10/16/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 205.76
ATM. PRESSURE (PSI): (Start) 14.02 (Finish) 14.04

PROBE TYPE Westbay
SERIAL NO. EMS 2502
PROJECT: JPL
OPERATOR(S) T. 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 (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	✓	✓	✓	✓	✓	182.38	✓	168.40	✓	~~51.85~~ 168.38	✓	182.38	23.6	436	7.18	2	5.01	-112	1345	MW-22-5
4	1	✓	✓	✓	✓	✓	129.93	✓	117.96	✓	117.95	✓	129.93	23.4	418	6.97	2	7.48	118	1430	MW-22-4
3	1	✓	✓	✓	✓	✓	96.07	✓	87.38	✓	87.38	✓	96.07	23.4	532	7.47	2	4.61	101	1500	MW-22-3
	2	✓	✓	✓	✓	✓	95.73	✓	87.37	✓	87.37	✓	95.74							1510	DUP-4-4019
2	1	✓	✓	✓	✓	✓	69.83	✓	61.33	✓	61.32	✓	69.83	23.3	687	7.50	2	6.22	112	1615	MW-22-2
1	1	✓	✓	✓	✓	✓	32.89	✓	25.57	✓	25.54	✓	32.89	22.1	1204	7.43	3	5.75	113	1630	MW-22-1

Comments:

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-23
SAMPLING DATE(S) 10/18/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 140.60
ATM. PRESSURE (PSI): (Start) 14.06 (Finish) 14.07

PROBE TYPE Westbay Sampler 0-500psi
SERIAL NO. EMS 2502
PROJECT: JPL Pasadena
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	✓	✓	✓	✓	✓	190.26	✓	177.98	✓	177.48	✓	190.26	17.2	545	6.49	4	5.61	-71	0745	MW-23-5
		✗	✗																		
4	1	✓	✓	✓	✓	✓	148.18	✓	136.02	✓	136.02	✓	148.22	17.4	383	6.32	3	9.45	116	0815	MW-23-4
3	1	✓	✓	✓	✓	✓	93.54	✓	85.19	✓	85.19	✓	93.58	17.5	486	6.57	1	10.75	96	0850	MW-23-3
2	1	✓	✓	✓	✓	✓	65.34	✓	57.16	✓	57.15	✓	65.34	17.5	1050	6.57	1	7.38	104	0915	MW-23-2
	2	✓	✓	✓	✓	✓	65.31	✓	57.11	✓	57.11	✓	65.31								
1	1	✓	✓	✓	✓	✓	30.54	✓	23.81	✓	23.39	✓	30.56	20.1	667	6.66	1	5.70	92	0950	MW-23-1
	2	✓	✓	✓	✓	✓	29.66	✓	23.80	✓	23.77	✓	29.65								

Comments:

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-24
SAMPLING DATE(S) 10/16/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 215.30
ATM. PRESSURE (PSI): (Start) 14.09 (Finish) 14.11

PROBE TYPE Westbay
SERIAL NO. EMS2502
PROJECT: JPL
OPERATOR(S) T. 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 (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	✓	✓	✓	✓	✓	216.04	✓	192.11	✓	192.11	✓	216.03	22.3	665	7.31	1	6.55	58	0845	MW-24-5
	2	✓	✓	✓	✓	✓	216.00	✓	192.12	✓	192.12	✓	216.01								
4	1	✓	✓	✓	✓	✓	162.06	✓	142.27	✓	142.27	✓	162.66	23.4	246	8.58	1	~~7.00~~ ~~160~~ IM	~~160~~ ~~7~~ IM	0950	MW-24-4
3	1	✓	✓	✓	✓	✓	110.93	✓	94.75	✓	94.75	✓	110.92	23.8	539	7.96	2	4.47	-110	1030	MW-24-3
2	1	✓	✓	✓	✓	✓	83.88	✓	68.52	✓	68.52	✓	83.91	24.7	643	7.59	1	5.45	87	1100	MW-24-2
	2	✓	✓	✓	✓	✓	83.86	✓	68.54	✓	68.56	✓	83.89							~~1200~~ NF	
1	1	✓	✓	✓	✓	✓	~~43.43~~ 42.99	✓	30.14	✓	~~27.~~ NF 28.82	✓	43.00	26.9	753	7.44	5	5.08	69	1200	MW-24-1
	2	✓	✓	✓	✓	✓	42.93	✓	30.03	✓	30.03	✓	42.94								

Comments: TB-3-101619@0700

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-25
SAMPLING DATE(S) 10/15/19
LOCATION: SJC
WATER LEVEL INSIDE CASING: 246.14
ATM. PRESSURE (PSI): (Start) 14.18 (Finish) 14.13

PROBE TYPE Westbay
SERIAL NO. EMS2502
PROJECT: SJC
OPERATOR(S) T. Hovey
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/ ~~Probe 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	✓	✓	✓	✓	✓	221.51 NF	✓	214.26	✓	214.24	✓	221.56	26.1	422	8.38	1	7.6	-171	1145	MW-25-5
4	1	✓	✓	✓	✓	✓	186.82	✓	180.25	✓	180.25	✓	186.82	26.9	838	7.69	2	4.6	-29	1245	MW-25-4
3	1	✓	✓	✓	✓	✓	130.58	✓	124.48	✓	124.48	✓	130.58	26.7	817	7.86	1	5.9	32	1320	MW-25-3
	2	✓	✓	✓	✓	✓	130.37	✓	124.46	✓	124.47	✓	130.38								
2	1	✓	✓	✓	✓	✓	95.52	✓	89.71	✓	89.72	✓	95.53	27.5	709	8.14	2	4.24	15	1440	MW-25-2
1	1	✓	✓	✓	✓	✓	67.14	✓	61.24	✓	61.27	✓	67.16	27.3	944	7.95	2	5.31	10	1515	MW-25-1

Comments: DUP-3-10/9/19 @ 1330
EB-2-10/15/19 @ 1530

WESTBAY™ GROUNDWATER MONITORING WELL
FIELD DATA LOG SHEET

WELL ID: MW-26
SAMPLING DATE(S) 10/18/19
LOCATION: JPL
WATER LEVEL INSIDE CASING: 62.58
ATM. PRESSURE (PSI): (Start) 14.13 (Finish) 14.09

PROBE TYPE Westbay Sampler 0-500psi
SERIAL NO. EMS2502
PROJECT: JPL Pasadena
OPERATOR(S) T. Hornoy
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
2	1	✓	✓	✓	✓	✓	83.01	✓	57.28	✓	57.29	✓	83.01	23.4	748	7.46	1	6.36	82	1200	MW-26-2
	2	✓	✓	✓	✓	✓	81.47	✓	57.28	✓	57.26	✓	81.46								
1	1	✓	✓	✓	✓	✓	49.03	✓	23.13	✓	23.10	✓	49.01	23.8	848	7.28	3	4.78	84	1245	MW-26-1
	2	✓	✓	✓	✓	✓	46.59	✓	23.11	✓	23.09	✓	46.55								

Comments: TB-S-101819@0700
EB-S-101819@1300