

## **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 third quarter 2014 sampling event was conducted by Blaine Tech Services, Inc.

## WELL MONITORING DATA SHEET

|  |                                     |
|--|-------------------------------------|
| Project #: <u>140725-AW1</u>   | Site: <u>JPL</u>                    |
| Sampler: <u>AW</u>   | Gauging Date: <u>8-6-14</u>         |
| Well I.D.: <u>MW-5</u>   | Well Diameter: 2 3 <u>(4)</u> 6 8   |
| Total Well Depth (TD): <u>140</u>  | Depth to Water (DTW): <u>117.48</u> |
| Depth to Free Product:   | Thickness of Free Product (feet):   |
| Referenced to: <u>PVC</u> Grade  | Flow Cell Type <u>YSI-Pro Plus</u>  |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>121.98</u> |                                     |

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

Flow Rate = 1 gpm  
 Start Purge Date = 8-6-14 Pump @ 125'

|                                |                   |                   |
|--------------------------------|-------------------|-------------------|
| <u>14.7</u> (Gals.) X <u>3</u> | <u>=</u>          | <u>44.1</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 (°C) | pH   | Cond. (mS or $\mu$ S) | Turbidity (NTUs) | D.O. (mg/L) | ORP (mV) | Gals. Removed | DTW    |
|------|-----------|------|-----------------------|------------------|-------------|----------|---------------|--------|
| 1055 | 16.7      | 6.59 | 659                   | 3                | 4.90        | 103.2    | 8             | 117.67 |
| 1102 | 16.5      | 6.55 | 645                   | 5                | 4.94        | 103.3    | 15            | 117.67 |
| 1110 | 16.4      | 6.53 | 649                   | 2                | 4.81        | 109.9    | 23            | 117.67 |
| 1117 | 16.3      | 6.52 | 653                   | 1                | 4.78        | 112.4    | 30            | 117.67 |
| 1125 | 16.3      | 6.53 | 649                   | 1                | 4.79        | 113.9    | 38            | 117.67 |
| 1132 | 16.3      | 6.53 | 646                   | 1                | 4.76        | 114.4    | 45            | 117.67 |
|      |           |      |                       |                  |             |          |               |        |

Did well dewater? Yes  No  Gallons actually evacuated: 45

Sampling Date: 8-6-14 Sampling Time: 1133 Depth to Water: 117.67

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

Analyzed for: See CQC 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>140725-AW1</u>   | Site: <u>JPL</u>                    |
| Sampler: <u>AW</u>   | Gauging Date: <u>8-6-14</u>         |
| Well I.D.: <u>MW-6</u>   | Well Diameter: 2 3 <u>(4)</u> 6 8   |
| Total Well Depth (TD): <u>245</u>  | Depth to Water (DTW): <u>222.61</u> |
| Depth to Free Product:   | Thickness of Free Product (feet):   |
| Referenced to: <u>(PVC)</u> Grade  | Flow Cell Type <u>YSI-Pro Plus</u>  |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>227.08</u> |                                     |

Purge Method: Disposal Bailer Positive Air Displacement Electric Submersible

Water

2" Rediflo pump dedicated

Extraction Pump

Other \_\_\_\_\_

Sampling Method: Disposal Bailer Extraction Port Dedicated Tubing

Other: (PVC)

Flow Rate = 1 gpm

Start Purge Date: 8-6-14 Pump @ 230'

14.6 (Gals.) X 3 = 43.8 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 (°C) | pH   | Cond. (mS or <u>µS</u> ) | Turbidity (NTUs) | D.O. (mg/L) | ORP (mV) | Gals. Removed | DTW    |
|------|-----------|------|--------------------------|------------------|-------------|----------|---------------|--------|
| 0736 | 22.1      | 6.51 | 1227                     | 10               | 6.34        | 125.1    | 8             | 223.09 |
| 0743 | 22.0      | 6.52 | 1269                     | 6                | 6.52        | 127.2    | 15            | 223.14 |
| 0751 | 22.1      | 6.54 | 1254                     | 4                | 6.53        | 125.1    | 23            | 223.05 |
| 0758 | 22.1      | 6.55 | 1252                     | 4                | 6.57        | 126.0    | 30            | 223.06 |
| 0806 | 22.1      | 6.53 | 1251                     | 4                | 6.57        | 124.7    | 38            | 223.08 |
| 0813 | 22.1      | 6.53 | 1262                     | 4                | 6.62        | 123.7    | 45            | 223.09 |
|      |           |      |                          |                  |             |          |               |        |

Did well dewater?      Yes      No      Gallons actually evacuated: 45

Sampling Date: 8-6-14      Sampling Time: 0814      Depth to Water: 223.09

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):

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>140725-AW1</u>   | Site: <u>JPL</u>                    |
| Sampler: <u>KW</u>   | Gauging Date: <u>8-7-14</u>         |
| Well I.D.: <u>2 MW-7</u> <small>current</small>  | Well Diameter: 2 3 <u>(4)</u> 6 8   |
| Total Well Depth (TD): <u>275</u> <small>Historical</small> ( <u>267.77</u> )              | Depth to Water (DTW): <u>256.53</u> |
| Depth to Free Product:   | Thickness of Free Product (feet):   |
| Referenced to: <u>PVC</u> Grade  | Flow Cell Type <u>YSI-Pro Plus</u>  |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>                    </u> |                                     |

|   |   |  |
|---|---|--|
| Purge Method:<br><input checked="" type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Positive Air Displacement<br><input type="checkbox"/> Electric Submersible | Watera<br><input checked="" type="checkbox"/> 2" Rediflo pump<br><input type="checkbox"/> Extraction Pump<br><input type="checkbox"/> Other | Sampling Method:<br><input checked="" type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Extraction Port<br><input type="checkbox"/> Dedicated Tubing<br><input type="checkbox"/> Other |
|---|---|--|

Flow Rate= \_\_\_\_\_

Start Purge Date= \_\_\_\_\_

Pump @ 265?

|                 |                   |                   |
|-----------------|-------------------|-------------------|
| (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         | radius <sup>2</sup> * 0.163 |

| Time   | Temp (°C) | pH   | Cond. (mS or $\mu$ S) | Turbidity (NTUs) | D.O. (mg/L) | ORP (mV) | Gals. Removed | DTW |
|--|-----------|------|-----------------------|------------------|-------------|----------|---------------|-----|
| - Attempted to use dedicated pump. Pump depth is above depth to water. |           |      |                       |                  |             |          |               |     |
| - Sampled w/ disp. bailer  |           |      |                       |                  |             |          |               |     |
| 1326   | 24.3      | 7.37 | 755                   | 986              | 2.50        | 35.7     | —             |     |

Did well dewater? Yes  No  Gallons actually evacuated: ~~256.53~~

Sampling Date: 8-7-14      Sampling Time: 1326      Depth to Water: 256.53

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 #: <u>140725-AW1</u>   | Site: <u>JPL</u>                    |
| Sampler: <u>AW</u>   | Gauging Date: <u>8-7-14</u>         |
| Well I.D.: <u>MW-8</u>   | Well Diameter: 2 3 <u>4</u> 6 8     |
| Total Well Depth (TD): <u>205</u>  | Depth to Water (DTW): <u>183.02</u> |
| Depth to Free Product:   | Thickness of Free Product (feet):   |
| Referenced to: <u>PVC</u> Grade  | Flow Cell Type <u>YSI-Pro Plus</u>  |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>187.41</u> |                                     |

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

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

Flow Rate = 1 gpm  
 Start Purge Date = 8-7-14 Pump 195'

|                                |                     |                   |
|--------------------------------|---------------------|-------------------|
| <u>14.3</u> (Gals.) X <u>3</u> | <u>= 42.9</u> Gals. |                   |
| 1 Case Volume                  | Specified Volumes   | Calculated Volume |

| Well Diameter | Multiplier | Well Diameter | Multiplier                  |
|---------------|------------|---------------|-----------------------------|
| 1"            | 0.04       | 4"            | 0.65                        |
| 2"            | 0.16       | 6"            | 1.47                        |
| 3"            | 0.37       | Other         | radius <sup>2</sup> * 0.163 |

| Time | Temp (°C) | pH   | Cond. (mS or $\mu$ S) | Turbidity (NTUs) | D.O. (mg/L) | ORP (mV) | Gals. Removed | DTW    |
|------|-----------|------|-----------------------|------------------|-------------|----------|---------------|--------|
| 1037 | 19.5      | 6.80 | 584                   | 5                | 6.36        | 57.3     | 8             | 183.13 |
| 1044 | 19.5      | 6.73 | 584                   | 2                | 6.27        | 65.9     | 15            | 183.13 |
| 1051 | 19.4      | 6.72 | 589                   | 1                | 6.22        | 73.4     | 22            | 183.13 |
| 1058 | 19.4      | 6.71 | 587                   | 3                | 6.20        | 72.4     | 29            | 183.13 |
| 1105 | 19.4      | 6.71 | 588                   | 3                | 6.18        | 72.1     | 36            | 183.13 |
| 1112 | 19.4      | 6.71 | 589                   | 3                | 6.16        | 75.3     | 43            | 183.13 |

Did well dewater? Yes  No  Gallons actually evacuated: 43

Sampling Date: 8-7-14 Sampling Time: 1113 Depth to Water: 183.13

Sample I.D.: MW-8 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>140725-AW1</u>   | Site: <u>JPL</u>                    |
| Sampler: <u>AW</u>   | Gauging Date: <u>8-6-14</u>         |
| Well I.D.: <u>MW-10</u>  | Well Diameter: 2 3 <u>4</u> 6 8     |
| Total Well Depth (TD): <u>155</u>  | Depth to Water (DTW): <u>131.70</u> |
| Depth to Free Product:   | Thickness of Free Product (feet):   |
| Referenced to: <u>PVC</u> Grade  | Flow Cell Type <u>YSI-Pro Plus</u>  |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>136.36</u> |                                     |

Purge Method:  Disposable Bailer  Positive Air Displacement  Electric Submersible

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

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

Flow Rate= 1 gpm

Start Purge Date= 8-6-14 Pump @ 140'

15.2 (Gals.) X 3 = 45.6 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 <sup>2</sup> * 0.163 |

| Time | Temp (°C) | pH   | Cond. (mS or $\mu$ S) | Turbidity (NTUs) | D.O. (mg/L) | ORP (mV) | Gals. Removed | DTW    |
|------|-----------|------|-----------------------|------------------|-------------|----------|---------------|--------|
| 0908 | 21.1      | 6.61 | 1263                  | 2                | 6.84        | 102.0    | 8             | 131.75 |
| 0916 | 21.2      | 6.60 | 1261                  | 2                | 6.91        | 98.4     | 16            | 131.86 |
| 0924 | 21.2      | 6.60 | 1261                  | 1                | 7.02        | 97.4     | 24            | 131.88 |
| 0931 | 21.2      | 6.60 | 1260                  | 2                | 6.91        | 96.0     | 31            | 131.88 |
| 0939 | 21.3      | 6.60 | 1259                  | 1                | 6.97        | 97.8     | 39            | 131.88 |
| 0946 | 21.3      | 6.60 | 1259                  | 1                | 7.09        | 96.4     | 46            | 131.88 |
|      |           |      |                       |                  |             |          |               |        |

Did well dewater? Yes   No      Gallons actually evacuated: 46

Sampling Date: 8-6-14      Sampling Time: 0947      Depth to Water: 131.88

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 #: <u>140725-XW1</u>                                   | Site: <u>JPL</u>                    |
| Sampler: <u>XW</u>   | Gauging Date: <u>8-7-14</u>         |
| Well I.D.: <u>MW-13</u>  | Well Diameter: 2 3 <u>(4)</u> 6 8   |
| Total Well Depth (TD): <u>234.71</u>                           | Depth to Water (DTW): <u>225.73</u> |
| Depth to Free Product:   | Thickness of Free Product (feet):   |
| Referenced to: <u>(PVC)</u> Grade                              | Flow Cell Type <u>YSI-ProPlus</u>   |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: |                                     |

|  |   |  |
|--|---|--|
| Purge Method:<br><input type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Positive Air Displacement<br><input type="checkbox"/> Electric Submersible | <input checked="" type="checkbox"/> Waterra<br><input checked="" type="checkbox"/> 2" Rediflo pump<br><input checked="" type="checkbox"/> Extraxion Pump<br>Other _____ | Sampling Method:<br><input checked="" type="checkbox"/> Disposable Bailer<br><input type="checkbox"/> Extraction Port<br><input type="checkbox"/> Dedicated Tubing<br>Other: _____ |
|--|---|--|

Flow Rate= \_\_\_\_\_  
 Start Purge Date= \_\_\_\_\_

|                       |                   |                   |
|-----------------------|-------------------|-------------------|
| _____ (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         | radius <sup>2</sup> * 0.163 |

| Time   | Temp (°C) | pH   | Cond. (mS or µS) | Turbidity (NTUs) | D.O. (mg/L) | ORP (mV) | Gals. Removed | DTW |
|--|-----------|------|------------------|------------------|-------------|----------|---------------|-----|
| - DTW is below pump depth. Pulled dedicated pump and attempted to use portable pump. |           |      |                  |                  |             |          |               |     |
| - Unable to purge w/ portable pump   |           |      |                  |                  |             |          |               |     |
| - Sampled w/ disp. bailer  |           |      |                  |                  |             |          |               |     |
| 1228   | 21.4      | 6.96 | 1045             | 697              | 5.84        | 40.6     | ✓             |     |

Did well dewater? Yes  No  Gallons actually evacuated: \_\_\_\_\_

Sampling Date: 8-7-14 Sampling Time: 1228 Depth to Water: 225.73

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   |

## WELL MONITORING DATA SHEET

|  |                                    |
|--|------------------------------------|
| Project #: 140725-AW1  | Site: JPL                          |
| Sampler: A-2   | Gauging Date: 8-7-14               |
| Well I.D.: MW-15   | Well Diameter: 2 3 <u>4</u> 6 8    |
| Total Well Depth (TD): 74'   | Depth to Water (DTW): 38.28        |
| Depth to Free Product:   | Thickness of Free Product (feet):  |
| Referenced to: <u>PVC</u> Grade                                      | Flow Cell Type <u>YSI-Pro Plus</u> |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 45.42 |                                    |

Purge Method: Water Sampling Method:

Disposable Bailer       2" Redflo pump       Disposable Bailer  
 Positive Air Displacement       Extraction Pump       Extraction Port  
 Electric Submersible       Other \_\_\_\_\_       Dedicated Tubing  
 Other: \_\_\_\_\_

Flow Rate = 2 gpm  
 Start Purge Date = 8-7-14 Pump C-54'

$23.3 \text{ (Gals.)} \times 3 = 69.9 \text{ Gals.}$   
 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 (°C) | pH   | Cond. (mS or <u>µS</u> ) | Turbidity (NTUs) | D.O. (mg/L) | ORP (mV) | Gals. Removed | DTW   |
|------|-----------|------|--------------------------|------------------|-------------|----------|---------------|-------|
| 0740 | 17.5      | 6.76 | 523                      | 1                | 0.24        | 108.1    | 12            | 38.80 |
| 0746 | 17.4      | 6.83 | 526                      | 1                | 0.24        | 91.6     | 24            | 38.91 |
| 0752 | 17.4      | 6.84 | 526                      | 1                | 0.20        | 80.2     | 36            | 38.92 |
| 0758 | 17.4      | 6.86 | 527                      | 1                | 0.20        | 74.0     | 48            | 38.92 |
| 0804 | 17.4      | 6.87 | 526                      | 1                | 0.20        | 70.4     | 60            | 38.95 |
| 0810 | 17.4      | 6.91 | 526                      | 1                | 0.19        | 67.9     | 72            | 38.97 |
|      |           |      |                          |                  |             |          |               |       |

Did well dewater?      Yes      No      Gallons actually evacuated: 72

Sampling Date: 8-7-14      Sampling Time: 0811      Depth to Water: 38.97

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>140725-AW1</u>   | Site: <u>JPL</u>                    |
| Sampler: <u>AW</u>   | Gauging Date: <u>8-6-14</u>         |
| Well I.D.: <u>MW-16</u>  | Well Diameter: 2 3 <u>4</u> 6 8     |
| Total Well Depth (TD): <u>285'</u>   | Depth to Water (DTW): <u>277.69</u> |
| Depth to Free Product:   | Thickness of Free Product (feet):   |
| Referenced to: <u>PVC</u> Grade  | Flow Cell Type <u>KSI Pro Plus</u>  |
| DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>      </u> |                                     |

Purge Method: ~~Disposable Bailer~~ ~~2" Rediflo pump~~ ~~Extraction Pump~~ ~~Other~~ ~~Water~~

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

Flow Rate = \_\_\_\_\_  
 Start Purge Date = \_\_\_\_\_

(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 (°C) | pH   | Cond. (mS or µS) | Turbidity (NTUs) | D.O. (mg/L) | ORP (mV) | Gals. Removed | DTW |
|---|-----------|------|------------------|------------------|-------------|----------|---------------|-----|
| - Depth to water is below dedicated pump (265') |           |      |                  |                  |             |          |               |     |
| - Collect sample w/ disp. bailer                |           |      |                  |                  |             |          |               |     |
|   |           |      |                  |                  |             |          |               |     |
|   |           |      |                  |                  |             |          |               |     |
|   |           |      |                  |                  |             |          |               |     |
|   |           |      |                  |                  |             |          |               |     |
| 1300  | 25.1      | 8.36 | 716              | 562              | 5.47        | -16.1    | —             |     |

Did well dewater? Yes  No  Gallons actually evacuated:       

Sampling Date: 8-6-14      Sampling Time: 1300      Depth to Water: 277.69

Sample I.D.: MW-16      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-3  
 SAMPLING DATE(S): 8-4-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 178.37  
 ATM. PRESSURE (PSI): (Start) 14.10 (Finish) 14.10  
25.65°C 18.80°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS2502  
 PROJECT: JPL  
 OPERATOR(S): KD  
 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            |
| 4           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 183.61                      | ✓  | 183.48              | ✓          | 183.49              | ✓                     | 183.60                      | 20.9             | 539        | 7.25 | 83              | 4.36                   | 211.8    | 0745        | MW-3-4            |
| 3           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 91.16                       | ✓  | 91.82               | ✓          | 91.81               | ✓                     | 91.16                       | 21.4             | 525        | 7.43 | 9               | 7.02                   | 123.5    | 0830        | MW-3-3            |
|             | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 91.12                       | ✓  | 91.82               | ✓          | 91.80               | ✓                     | 91.14                       |                  |            |      |                 |                        |          | 0920        | <del>MW-3-2</del> |
| 2           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 50.10                       | ✓  | 53.08               | ✓          | 53.10               | ✓                     | 50.13                       | 21.7             | 526        | 7.57 | 5               | 6.07                   | 114.7    | 0920        | MW-3-2            |
|             | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 47.10                       | ✓  | 53.10               | ✓          | 53.10               | ✓                     | 47.12                       |                  |            |      |                 |                        |          |             |                   |

Comments: TB-6-8/4/14 EB-6-8/4/14 DWP-5-30/14 @ Part 3  
0700 0720 0840

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-4  
 SAMPLING DATE(S): 8-5-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 132.91  
 ATM. PRESSURE (PSI): (Start) 14.23 (Finish) 14.10  
23.12°C 16.31°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EM 52502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 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 (p 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 |
| 3           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 97.17                       | ✓  | 93.63               | ✓          | 93.61               | ✓                     | 97.14                       | 19.4             | 500        | 7.17 | 6               | 7.92                   | 222.1    | 0745        | MW-4-3 |
|             | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 97.09                       | ✓  | 93.57               | ✓          | 93.54               | ✓                     | 97.06                       |                  |            |      |                 |                        |          |             |        |
| 2           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 58.22                       | ✓  | 58.34               | ✓          | 58.33               | ✓                     | 58.22                       | 18.9             | 1131       | 7.04 | 9               | 5.10                   | 37.9     | 0845        | MW-4-2 |
|             | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 58.16                       | ✓  | 58.33               | ✓          | 58.34               | ✓                     | 58.18                       |                  |            |      |                 |                        |          |             |        |
| 1           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 18.89                       | ✓  | 23.25               | ✓          | 23.25               | ✓                     | 18.91                       | 17.8             | 679        | 7.04 | 2               | 4.62                   | 48.2     | 0920        | MW-4-1 |
|             | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 19.40                       | ✓  | 23.24               | ✓          | 23.10               | ✓                     | 19.40                       |                  |            |      |                 |                        |          |             |        |

Comments: TB-7-8/5/14 EB-7-0/5/14 SB-3-8/5/14 DUP-7-30/14 @ Port 3 MS/MSD @ Port 1  
0700 0705 0715 0705 0755

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-11  
 SAMPLING DATE(S): 7-29-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 180.94  
 ATM. PRESSURE (PSI): (Start) 14.11 (Finish) 14.06  
24.68°C 21.27°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO: EMS2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 WEATHER: Clear

| Port Number | Run Number | Surface Function Tests / Position Sampler<br>(probe in top of collar) / (lower probe to port) |   |                                      |                                    |  |                                | Sample Collection Checks<br>(probe at sampling port in MP casing) |                     |            |                     |                         |                                | Field Parameters       |               |      |                    |                              | Sample      |                |         |
|-------------|------------|---|---|--------------------------------------|------------------------------------|--|--------------------------------|---|---------------------|------------|---------------------|-------------------------|--------------------------------|------------------------|---------------|------|--------------------|------------------------------|-------------|----------------|---------|
|             |            | Arm out /<br>Land Probe   | Shoe Out/<br>Close Valve/<br>Check Vacuum | Open Valve/<br>Apply Vacuum<br>(psi) | Close Valve/<br>Shoe In/<br>Arm In | Locate Port/<br>Arm Out/<br>Land Probe | Pressure in MP<br>Casing (psi) | Shoe Out  | Port Pressure (psi) | Open Valve | Port Pressure (psi) | Close Valve/<br>Shoe In | Pressure in MP<br>Casing (psi) | Sample<br>Temp<br>(°C) | SC<br>(µS/cm) | pH   | Turbidity<br>(NTU) | Dissolved<br>Oxygen<br>(ppm) | ORP<br>(mV) | Sample<br>Time | Sample  |
| 4           | 1          | ✓   | ✓   | ✓                                    | ✓                                  | ✓                                      | 165.48                         | ✓   | 160.89              | ✓          | 160.74              | ✓                       | 165.47                         | 20.5                   | 310           | 8.37 | 3                  | 3.80                         | -146.7      | 0740           | MW-11-4 |
| 3           | 1          | ✓   | ✓   | ✓                                    | ✓                                  | ✓                                      | 125.78                         | ✓   | 118.21              | ✓          | 118.01              | ✓                       | 125.49                         | 20.1                   | 399           | 8.21 | 14                 | 4.34                         | -36.0       | 0820           | MW-11-3 |
| 2           | 1          | ✓   | ✓   | ✓                                    | ✓                                  | ✓                                      | 51.64                          | ✓   | 48.69               | ✓          | 48.64               | ✓                       | 51.64                          | 20.1                   | 494           | 8.02 | 13                 | 3.13                         | -69.9       | 0900           | MW-11-2 |
| 1           | 1          | ✓   | ✓   | ✓                                    | ✓                                  | ✓                                      | 14.15                          | ✓   | 24.70               | ✓          | 24.38               | ✓                       | 14.16                          | 21.5                   | 510           | 7.81 | 6                  | 4.02                         | -8.8        | 0940           | MW-11-1 |
|             | 2          | ✓   | ✓   | ✓                                    | ✓                                  | ✓                                      | 14.19                          | ✓   | 24.40               | ✓          | 24.28               | ✓                       | 14.19                          |                        |               |      |                    |                              |             |                |         |

Comments: TR-2-7/29/14 EB-2-7/29/14 MS/MSD@PG+1  
0700 0705

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-12  
 SAMPLING DATE(S): 8-5-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 103.66  
 ATM. PRESSURE (PSI): (Start) 14.10 (Finish) 14.10  
19.21 °C 19.54 °C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EM52502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 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 (to psi) | Close Valve / Shoe in / Arm In | Locate Port / Arm Out / Land Probe | Pressure in MP Casing (psf) | Shoe Out   | Port Pressure (psf) | Open Valve | Port Pressure (psf) | Close Valve / Shoe In | Pressure in MP Casing (psf) | Sample Temp (°C)                 | SC (µS/cm) | pH   | Turbidity (NTU) | Dissolved Oxygen (ppm) | ORP (mV) | Sample Time | Sample  |
| 5           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 208.86 ✓                    | ✓  | 169.99 ✓            | ✓          | 169.96 ✓            | ✓                     | 208.87                      | 20.1                             | 454        | 7.93 | 62              | 4.69                   | -106.8   | 1040        | MW-12-5 |
| 4           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 160.10 ✓                    | ✓  | 132.10 ✓            | ✓          | 132.07 ✓            | ✓                     | 160.10                      | 20.3                             | 497        | 7.92 | 4               | 5.19                   | -82.3    | 1120        | MW-12-4 |
| 3           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 111.78 ✓                    | ✓  | 85.26 ✓             | ✓          | 85.28 ✓             | ✓                     | 111.80                      | 20.0                             | 452        | 8.07 | 2               | 4.90                   | -115.6   | 1200        | MW-12-3 |
| 2           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 76.82 ✓                     | ✓  | 51.61 ✓             | ✓          | 51.61 ✓             | ✓                     | 76.82                       | 20.3                             | 551        | 7.77 | 6               | 3.74                   | -120.3   | 1300        | MW-12-2 |
| 1           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 31.02 ✓                     | ✓  | 14.11 ✓             | ✓          | 14.11 ✓             | ✓                     | 31.01                       | Port is dry. No sample collected |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |
|             |            |                      |  |                                    |                                |                                    |                             |  |                     |            |                     |                       |                             |                                  |            |      |                 |                        |          |             |         |

Comments: Level IV @ Port 3

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-14  
 SAMPLING DATE(S): 7-29-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 180.47  
 ATM. PRESSURE (PSI): (Start) 14.08 (Finish) 14.04  
27.97 21.84°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 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 (if 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  |
| 5           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 174.09   | ✓        | 158.84              | ✓          | 158.84              | ✓                     | 174.09                      | 24.4             | 372        | 8.44 | 3               | 4.19                   | -111.9   | 1050        | MW-14-5 |
| 4           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 137.71   | ✓        | 122.63              | ✓          | 122.64              | ✓                     | 137.41                      | 25.2             | 773        | 7.98 | 2               | 4.98                   | -44.0    | 1130        | MW-14-4 |
| 3           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 106.07   | ✓        | 90.53               | ✓          | 90.54               | ✓                     | 106.09                      | 25.3             | 1186       | 8.04 | 3               | 2.46                   | -49.8    | 1240        | MW-14-3 |
| 2           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 60.26  | ✓        | 45.03               | ✓          | 45.04               | ✓                     | 60.26                       | 25.2             | 1262       | 7.89 | 2               | 2.81                   | -48.4    | 1320        | MW-14-2 |
| 1           | 1          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 28.11  | ✓        | 15.09               | ✓          | 14.89               | ✓                     | 28.12                       | 25.0             | 1273       | 7.14 | 3               | 3.05                   | -20.8    | 1350        | MW-14-1 |
|             | 2          | ✓                    | ✓  | ✓                                  | ✓                              | ✓                                  | 28.58  | ✓        | 15.12               | ✓          | 15.11               | ✓                     | 28.61                       |                  |            |      |                 |                        |          |             |         |

Comments: Level IV @ Port 5

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-17  
 SAMPLING DATE(S): 7-30-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 206.14  
 ATM. PRESSURE (PSI): (Start) 14.03 (Finish) 14.03  
26.83°C 17.78°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): tw  
 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 | Shut Out / Close Valve / Check Vacuum  | Open Valve / Apply Vacuum (5 psi) | Close Valve / Shut In / Arm In | Locate Port / Arm Out / Land Probe | Pressure in MP Casing (psi) | Shut Out   | Port Pressure (psi) | Open Valve | Port Pressure (psi) | Close Valve / Shut In | Pressure in MP Casing (psi) | Sample Temp (°C) | SC (µS/cm) | pH   | Turbidity (NTU) | Dissolved Oxygen (ppm) | ORP (mV) | Sample Time | Sample  |
| 4           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 179.30                      | ✓  | 143.72              | ✓          | 143.62              | ✓                     | 179.32                      | 20.8             | 603        | 7.72 | 3               | 5.48                   | 207.0    | 0800        | MW-17-4 |
| 3           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 129.89                      | ✓  | 101.10              | ✓          | 101.08              | ✓                     | 129.88                      | 21.2             | 690        | 8.02 | 3               | 4.71                   | 149.20   | 0900        | MW-17-3 |
|             | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 129.87                      | ✓  | 101.10              | ✓          | 101.09              | ✓                     | 129.87                      |                  |            |      |                 |                        |          |             |         |
| 2           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 87.26                       | ✓  | 62.74               | ✓          | 62.73               | ✓                     | 87.25                       | 21.2             | 487        | 7.89 | 5               | 4.43                   | -117.20  | 0950        | MW-17-2 |

Comments: TB-3-7/30/14 0700 SB-2-7/30/14 0710 EB-3-7/30/14 0720 DUP-2-30/14 @ Port 3 0910

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-18  
 SAMPLING DATE(S): 7-30-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 292.16'  
 ATM. PRESSURE (PSI): (Start) 14.03 (Finish) 14.00  
29.41°C 18.65°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: FMS 2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 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 (if 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  |  |  |        |  |
| 5           | 1          | ✓                    | ✓                                     | ✓                                  | ✓                              | ✓                                  | 187.71   | ✓        | 175.86              | ✓          | 175.77              | ✓                     | 187.71   | 23.0             | 333        | 8.59 | 2               | 3.77                   | -148.4           | 1100        | MW-18-5 |  |  |        |  |
| 4           | 1          | ✓                    | ✓                                     | ✓                                  | ✓                              | ✓                                  | 136.40   | ✓        | 125.49              | ✓          | 125.49              | ✓                     | 136.42   | 23.5             | 420        | 8.07 | 2               | 55.3                   | -138.2           | 1140        | MW-18-4 |  |  |        |  |
|             | 2          | ✓                    | ✓                                     | ✓                                  | ✓                              | ✓                                  | 136.39   | ✓        | 125.49              | ✓          | 125.49              | ✓                     | 136.31   |                  |            |      |                 |                        |                  |             |         |  |  |        |  |
| 3           | 1          | ✓                    | ✓                                     | ✓                                  | ✓                              | ✓                                  | 75.31  | ✓        | 71.04               | ✓          | 71.04               | ✓                     | 75.34  | 22.9             | 545        | 8.07 | 2               | 3.25                   | -177.9           | 1300        | MW-18-3 |  |  |        |  |
|             | 2          | ✓                    | ✓                                     | ✓                                  | ✓                              | ✓                                  | 72.32  | ✓        | 71.07               | ✓          | 71.06               | ✓                     | 72.31  |                  |            |      |                 |                        |                  |             |         |  |  |        |  |
| 2           | 1          | ✓                    | ✓                                     | ✓                                  | ✓                              | ✓                                  | 33.32  | ✓        | 32.56               | ✓          | 32.54               | ✓                     | 33.33  | 22.7             | 475        | 7.76 | 10              | 3.71                   | -141.7           | 1340        | MW-18-2 |  |  |        |  |
|             | 2          | ✓                    | ✓                                     | ✓                                  | ✓                              | ✓                                  | 32.31  | ✓        | 32.54               | ✓          | 32.54               | ✓                     | 32.32  |                  |            |      |                 |                        |                  |             |         |  |  |        |  |

Comments: Level 1 @ Port 5 DUP-3-3014 @ Port 4 MS/MSA @ Port 3  
7:30-11:50



WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-19  
 SAMPLING DATE(S): 7-28-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 135.54  
 ATM. PRESSURE (PSI): (Start) 14.12 (Finish) 14.09  
25.92°C 21.04°C

PROBE TYPE: Sampler 0-500 PSI  
 SERIAL NO.: EM52502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): bw  
 WEATHER: Overcast

| Port Number | Run Number | Probe to Top Collar  | Surface Function Tests / Position Sampler<br>(probe in top of collar) / (lower probe to port) |                                   |                                 |                                    | Sample Collection Checks<br>(probe at sampling port in MP casing) |          |                     |            |                     |                        | Field Parameters            |                  |            |      |                 | Sample                 |          |             |         |
|-------------|------------|----------------------|---|-----------------------------------|---------------------------------|------------------------------------|---|----------|---------------------|------------|---------------------|------------------------|-----------------------------|------------------|------------|------|-----------------|------------------------|----------|-------------|---------|
|             |            | Arm out / Land Probe | Shoes Out / Close Valve / Check Vacuum  | Open Valve / Apply Vacuum (5 psi) | Close Valve / Shoes 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 / Shoes In | Pressure in MP Casing (psi) | Sample Temp (°C) | SC (µS/cm) | pH   | Turbidity (NTU) | Dissolved Oxygen (ppm) | ORP (mV) | Sample Time | Sample  |
| 5           | 1          | ✓                    | ✓   | ✓                                 | ✓                               | ✓                                  | 172.57  | ✓        | 131.26              | ✓          | 131.27              | ✓                      | 172.58                      | 21.5             | 664        | 7.97 | 2               | 4.64                   | -27.4    | 110         | MW-19-5 |
| 4           | 1          | ✓                    | ✓   | ✓                                 | ✓                               | ✓                                  | 149.09  | ✓        | 108.01              | ✓          | 108.00              | ✓                      | 149.09                      | 20.4             | 660        | 7.72 | 2               | 5.29                   | -40.9    | 11850       | MW-19-4 |
| 3           | 1          | ✓                    | ✓   | ✓                                 | ✓                               | ✓                                  | 126.52  | ✓        | 95.40               | ✓          | 95.40               | ✓                      | 126.52                      | 21.9             | 722        | 7.60 | 1               | 4.92                   | -21.6    | 1240        | MW-19-3 |
| 2           | 1          | ✓                    | ✓   | ✓                                 | ✓                               | ✓                                  | 92.83   | ✓        | 61.81               | ✓          | 61.83               | ✓                      | 92.83                       | 21.7             | 1074       | 7.44 | 40              | 5.00                   | -38.1    | 1315        | MW-19-2 |
| 1           | 1          | ✓                    | ✓   | ✓                                 | ✓                               | ✓                                  | 61.54   | ✓        | 32.54               | ✓          | 32.54               | ✓                      | 61.55                       | 21.1             | 532        | 7.82 | 12              | 4.38                   | -36.5    | 1345        | MW-19-1 |

Comments: JPL @ Port 3 EB-1-7/28/14 SB-1-7/28/14  
xi: 1545 1530

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-20  
 SAMPLING DATE(S): 7-28-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 193.10'  
 ATM. PRESSURE (PSI): (Start) 14.02 (Finish) 14.07  
24.14° C 19.13° C

PROBE TYPE \_\_\_\_\_  
 SERIAL NO. EM52502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): AW  
 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 (2 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   |  |
| 5           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 322.56   | ✓        | 305.60              | ✓          | 305.60              | ✓                     | 322.56                      | 20.0                             | 319        | 8.85 | 8               | 7.25<br><del>77.0</del> | -77.0    | 0800        | MW-20-75 |  |
| 4           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 235.82   | ✓        | 209.04              | ✓          | 209.01              | ✓                     | 235.84                      | 20.1                             | 328        | 8.78 | 2               | 92.0                    | -160.3   | 0840        | MW-20-4  |  |
| 3           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 175.97   | ✓        | 147.82              | ✓          | 147.81              | ✓                     | 175.97                      | 21.1                             | 319        | 9.30 | 3               | 4.79                    | -179.9   | 0930        | MW-20-3  |  |
| 2           | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 102.19   | ✓        | 81.03               | ✓          | 81.07               | ✓                     | 102.20                      | 20.4                             | 457        | 8.16 | 1               | 6.02                    | -98.0    | 1000        | MW-20-2  |  |
| 1           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 32.21  | ✓        | 14.13               | ✓          | 14.13               | ✓                     | 32.21                       | Part is Dry, no sample collected |            |      |                 |                         |          |             |          |  |

Comments: TB-1-7/28/14 DUP-1-30/14 @ Port 2 MS/MSD @ Port 4  
0700 1010

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-21  
 SAMPLING DATE(S): 8-4-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 118.06  
 ATM. PRESSURE (PSI): (Start) 14.06 (Finish) 14.06  
29.25°C 26.30°C

PROBE TYPE: Westbay Sampler 0-500psi  
 SERIAL NO.: EMS2508  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 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  |
| 4           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 129.13   | ✓        | 133.07              | ✓          | 133.08              | ✓                     | 129.13                      | 23.1                             | 852        | 7.86 | 3               | 5.08                   | 18.9     | 1020        | MW-21-5 |
|             | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 102.06   | ✓        | 106.21              | ✓          | 106.22              | ✓                     | 102.08                      | 23.1                             | 847        | 7.46 | 5               | 6.30                   | -6.2     | 1100        | MW-21-4 |
| 3           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 102.04   | ✓        | 106.21              | ✓          | 106.21              | ✓                     | 102.04                      | 24.24                            |            |      |                 |                        |          | 1100        |         |
| 2           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 71.26  | ✓        | 76.36               | ✓          | 76.39               | ✓                     | 71.87                       | 23.7                             | 1246       | 7.72 | 3               | 3.45                   | -1.6     | 1145        | MW-21-3 |
| 1           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 37.41  | ✓        | 42.23               | ✓          | 42.26               | ✓                     | 37.41                       | 24.5                             | 1422       | 7.56 | 14              | 2.94                   | 8.0      | 1310        | MW-21-2 |
|             |            |                      |  |                                   |                                |                                    | 14.13  | ✓        | 14.08               | ✓          | 14.08               | ✓                     | 14.13                       | Part is dry. No sample collected |            |      |                 |                        |          |             |         |

Comments: DUP-6-3014 @ Part 4 Level 1K @ Part 2  
1110

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-22  
 SAMPLING DATE(S): 7-31-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 161.56'  
 ATM. PRESSURE (PSI): (Start) 14.01 (Finish) 13.99  
26.68°C 19.73°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS2502  
 PROJECT: JPL Pasadena  
 OPERATOR(S): GW  
 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  |
| MW          | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 114.99   | ✓        | 88.64               | ✓          | 88.63               | ✓                     | 114.99                      | 20.8             | 587        | 7.65 | 3               | 4.96                   | 181.2    | 0640        | MW-22-3 |
| MW          | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 88.99  | ✓        | 62.47               | ✓          | 62.44               | ✓                     | 88.99                       | 20.7             | 644        | 8.00 | 1               | 3.91                   | 143.5    | 0720        | MW-22-2 |
| 1           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 51.42  | ✓        | 26.51               | ✓          | 26.52               | ✓                     | 51.42                       | 20.8             | 1185       | 7.41 | 12              | 3.66                   | 126.0    | 0800        | MW-22-1 |
|             | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 51.42  | ✓        | 26.52               | ✓          | 26.54               | ✓                     | 51.41                       |                  |            |      |                 |                        |          |             |         |

Comments: TB-4-7/31/14 EB-4-7/31/14  
0600 0610

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-23  
 SAMPLING DATE(S): 8-1-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 108.73'  
 ATM. PRESSURE (PSI): (Start) 14.06 (Finish) 14.07  
25.79°C 19.89°C

PROBE TYPE: Sampler O-Scoopsi  
 SERIAL NO: EUG2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): fw  
 WEATHER: Clear

| Port Number | Run Number | Surface Function Tests / Position Sampler<br>(probe in top of collar) / (lower probe to port) |                      |                                       |                                 |                                |                                    | Sample Collection Checks<br>(probe at sampling port in MP casing) |          |                     |            |                     |                       | Field Parameters            |                  |            |    |                 | Sample                 |          |             |
|-------------|------------|---|----------------------|---------------------------------------|---------------------------------|--------------------------------|------------------------------------|---|----------|---------------------|------------|---------------------|-----------------------|-----------------------------|------------------|------------|----|-----------------|------------------------|----------|-------------|
|             |            | Probe to Top Collar   | 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 |
| 4           | 1          | ✓   | ✓                    | ✓                                     | ✓                               | ✓                              | 161.81                             | ✓   | 135.52   | ✓                   | 135.52     | ✓                   | 161.83                | 21.3                        | 405              | 7.28       | 10 | 4.79            | 139.0                  | 0700     | MW-23-34    |
| 3           | 1          | ✓   | ✓                    | ✓                                     | ✓                               | ✓                              | 107.13                             | ✓   | 85.56    | ✓                   | 85.57      | ✓                   | 107.14                | 20.5                        | 512              | 7.64       | 3  | 5.24            | -95.5                  | 0740     | MW-23-3     |
| 2           | 1          | ✓   | ✓                    | ✓                                     | ✓                               | ✓                              | 79.02                              | ✓   | 57.47    | ✓                   | 57.46      | ✓                   | 79.00                 | 20.4                        | 1105             | 7.59       | 3  | 3.89            | 36.6                   | 0810     | MW-23-2     |
| 1           | 1          | ✓   | ✓                    | ✓                                     | ✓                               | ✓                              | 43.49                              | ✓   | 24.37    | ✓                   | 24.36      | ✓                   | 43.51                 | 20.5                        | 1201             | 7.24       | 5  | 3.89            | 42.6                   | 0840     | MW-23-1     |
|             | 2          | ✓   | ✓                    | ✓                                     | ✓                               | ✓                              | 43.51                              | ✓   | 24.34    | ✓                   | 24.32      | ✓                   | 43.50                 |                             |                  |            |    |                 |                        |          |             |

Comments: TB-5-8/1/14 EB-5-8/1/14  
0610 0630

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-24  
 SAMPLING DATE(S): 7-31-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 204.02'  
 ATM. PRESSURE (PSI): (Start) 14.02 (Finish) 13.99  
23.12°C 23.14°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EMS2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AMJ  
 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 psf) | Close Valve / Shoe In / Arm In | Locate Port / Arm Out / Land Probe | Pressure in MP Casing (psf) | Shoe Out   | Port Pressure (psf) | Open Valve | Port Pressure (psf) | Close Valve / Shoe In | Pressure in MP Casing (psf) | Sample Temp (°C) | SC (µS/cm) | pH   | Turbidity (NTU) | Dissolved Oxygen (ppm) | ORP (mV) | Sample Time | Sample  |
| 4           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 167.53                      | ✓  | 141.33              | ✓          | 141.33              | ✓                     | 167.53                      | 22.9             | 268        | 9.22 | 3               | 5.48                   | -178.8   | 0900        | MW-24-4 |
| 3           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 115.90                      | ✓  | 94.43               | ✓          | 94.44               | ✓                     | 115.89                      | 23.5             | 466        | 8.28 | 3               | 2.97                   | -157.5   | 0935        | MW-24-3 |
| 2           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 88.86                       | ✓  | 67.94               | ✓          | 67.94               | ✓                     | 88.86                       | 23.6             | 556        | 7.97 | 2               | 3.32                   | -124.3   | 1010        | MW-24-2 |
| 1           | 1          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 47.64                       | ✓  | 29.34               | ✓          | 29.34               | ✓                     | 47.64                       | 23.7             | 737        | 7.56 | 4               | 2.74                   | +12.0    | 1045        | MW-24-1 |
|             | 2          | ✓                    | ✓  | ✓                                 | ✓                              | ✓                                  | 47.64                       | ✓  | 29.33               | ✓          | 29.34               | ✓                     | 47.64                       |                  |            |      |                 |                        |          |             |         |

Comments: Level IV @ Port 3

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-25  
 SAMPLING DATE(S): 8-1-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 259.20'  
 ATM. PRESSURE (PSI): (Start) 14.18 (Finish) 14.14  
23.97°C 22.57°C

PROBE TYPE: Sampler 0-500 psi  
 SERIAL NO.: EM57502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 WEATHER: Clear

| Port Number | Run Number | Surface Function Tests / Position Sampler<br>(probe in top of collar) / (lower probe to port) |   |  |                                    |  |                                | Sample Collection Checks<br>(probe at sampling port in MP casing) |                     |            |                     |                         |                                | Field Parameters       |               |      |                    |                              | Sample      |                |         |
|-------------|------------|---|---|--|------------------------------------|--|--------------------------------|---|---------------------|------------|---------------------|-------------------------|--------------------------------|------------------------|---------------|------|--------------------|------------------------------|-------------|----------------|---------|
|             |            | Arm out/<br>Land Probe  | Shoe Out/<br>Close Valve/<br>Check Vacuum | Open Valve/<br>Apply Vacuum<br>(5 psi) | Close Valve/<br>Shoe In/<br>Arm In | Locate Port/<br>Arm Out/<br>Land Probe | Pressure in MP<br>Casing (psi) | Shoe Out  | Post Pressure (psi) | Open Valve | Post Pressure (psi) | Close Valve/<br>Shoe In | Pressure in MP<br>Casing (psi) | Sample<br>Temp<br>(°C) | SC<br>(µS/cm) | pH   | Turbidity<br>(NTU) | Dissolved<br>Oxygen<br>(ppm) | ORP<br>(mV) | Sample<br>Time | Sample  |
| 5           | 1          | ✓   | ✓   | ✓                                      | ✓                                  | ✓                                      | 215.28                         | ✓   | 215.80              | ✓          | 215.79              | ✓                       | 215.28                         | 21.7                   | 392           | 9.18 | 3                  | 4.60                         | -185.5      | 0940           | MW-25-5 |
| 4           | 1          | ✓   | ✓   | ✓                                      | ✓                                  | ✓                                      | 180.71                         | ✓   | 179.64              | ✓          | 179.64              | ✓                       | 180.71                         | 22.3                   | 816           | 7.76 | 3                  | 4.91                         | 11.1        | 1020           | MW-25-4 |
| 3           | 1          | ✓   | ✓   | ✓                                      | ✓                                  | ✓                                      | 124.34                         | ✓   | 126.46              | ✓          | 126.48              | ✓                       | 124.34                         | 22.3                   | 696           | 7.80 | 2                  | 4.29                         | 20.5        | 1055           | MW-25-3 |
| 2           | 1          | ✓   | ✓   | ✓                                      | ✓                                  | ✓                                      | 89.56                          | ✓   | 95.10               | ✓          | 95.10               | ✓                       | 89.56                          | 22.6                   | 769           | 7.41 | 2                  | 7.05                         | 29.0        | 1130           | MW-25-2 |
| 1           | 1          | ✓   | ✓   | ✓                                      | ✓                                  | ✓                                      | 61.12                          | ✓   | 68.26               | ✓          | 68.26               | ✓                       | 61.13                          | 24.5                   | 919           | 7.67 | 14                 | 3.39                         | -54.0       | 1240           | MW-25-1 |

Comments: Level IV @ Port 5 DUP-4-3014 @ Port 2  
1140

WESTBAY™ GROUNDWATER MONITORING WELL  
FIELD DATA LOG SHEET

WELL ID: MW-26  
 SAMPLING DATE(S): 7-31-14  
 LOCATION: JPL  
 WATER LEVEL INSIDE CASING: 64.60'  
 ATM. PRESSURE (PSI): (Start) 14.06 (Finish) 14.06  
29.61°C 23.99°C

PROBE TYPE: Sampler 0-500psi  
 SERIAL NO.: EM52507  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): tw  
 WEATHER: Clear

| Port Number | Run Number | Surface Function Tests / Position Sampler<br>(probe in top of collar) / (lower probe to port) |                      |                                       |                                 |                                | Sample Collection Checks<br>(probe at sampling port in MP casing) |                             |          |                     |            |                     | Field Parameters      |                             |                  |            |    | Sample          |                        |          |             |
|-------------|------------|---|----------------------|---------------------------------------|---------------------------------|--------------------------------|---|-----------------------------|----------|---------------------|------------|---------------------|-----------------------|-----------------------------|------------------|------------|----|-----------------|------------------------|----------|-------------|
|             |            | Probe to Top Collar   | 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 |
| 2           | 1          | ✓   | ✓                    | ✓                                     | ✓                               | ✓                              | 82.61   | ✓                           | 56.76    | ✓                   | 56.71      | ✓                   | 82.60                 | 23.5                        | 797              | 8.01       | 36 | 3.30            | -83.0                  | 1145     | MW-26-2     |
| 1           | 1          | ✓   | ✓                    | ✓                                     | ✓                               | ✓                              | 46.057  | ✓                           | 22.69    | ✓                   | 22.67      | ✓                   | 46.10                 | 24.1                        | 805              | 7.34       | 46 | 2.70            | -68.6                  | 1300     | MW-26-1     |
|             | 2          | ✓   | ✓                    | ✓                                     | ✓                               | ✓                              | 46.10   | ✓                           | 22.77    | ✓                   | 22.79      | ✓                   | 46.11                 |                             |                  |            |    |                 |                        |          |             |

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



## **ATTACHMENT 5: WATER LEVEL MEASUREMENTS**

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This attachment contains water level measurements for the JPL relatively shallow standpipe monitoring wells (MW-1, MW-5 through MW-10, MW-13, MW-15, and MW-16) and the Westbay™ multiport wells (MW-3, MW-4, MW-11, MW-12, MW-14, and MW-17 through MW-26) obtained during the third quarter 2014. Water level measurements were recorded before the sampling event on July 25, 2014 for the relatively shallow standpipe monitoring wells and for the Westbay™ multiport wells. Water level measurements were recorded after the sampling event on August 8, 2014 for the relatively shallow standpipe monitoring wells and the Westbay™ multiport wells. Water levels for the shallow wells were measured using a Solinst™ water level meter. In the deep multiport wells, the hydraulic head at each sampling port was measured with a Westbay™ MOSDAX sampling probe. Water level measurements were conducted by Blaine Tech Services, Inc.

## WELL GAUGING DATA

Project # 140725-AW1 Date 7-25-14 Client Tide water

Site JPL, Pasadena

| Well ID | Time | Well Size (in.) | Sheen / Odor | Depth to Immiscible Liquid (ft.) | Thickness of Immiscible Liquid (ft.) | Volume of Immiscibles Removed (ml) | Depth to water (ft.) | Depth to well bottom (ft.) | Survey Point: TOB or TOC | Notes |
|---------|------|-----------------|--------------|----------------------------------|--------------------------------------|------------------------------------|----------------------|----------------------------|--------------------------|-------|
| MW-1    | 1127 | 4               |              |                                  |                                      |                                    | 32.27                | pump                       |                          |       |
| MW-5    | 0723 | 4               |              |                                  |                                      |                                    | 115.71               |                            |                          |       |
| MW-6    | 1017 | 4               |              |                                  |                                      |                                    | 219.81               |                            |                          |       |
| MW-7    | 0920 | 4               |              |                                  |                                      |                                    | 255.40               |                            |                          |       |
| MW-8    | 0907 | 4               |              |                                  |                                      |                                    | 181.40               |                            |                          |       |
| MW-9    | 1133 | 4               |              |                                  |                                      |                                    | 23.54                |                            |                          |       |
| MW-10   | 0707 | 4               |              |                                  |                                      |                                    | 130.07               |                            |                          |       |
| MW-13   | 0611 | 4               |              |                                  |                                      |                                    | 224.36               |                            |                          |       |
| MW-15   | 0859 | 4               |              |                                  |                                      |                                    | 36.70                |                            |                          |       |
| MW-16   | 0618 | 4               |              |                                  |                                      |                                    | 276.04               | ↓                          | ↓                        |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-3  
 DATE: 7-25-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING  
 WEATHER: clear

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) JW  
 ATM. PRESSURE (P<sub>atm</sub>): (start) 14.06 (finish) 14.09  
26.96 °C 20.08 °C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P <sub>2</sub> -P <sub>atm</sub> )*2.307 ft/psi | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 5        | 653                            | 650        | 221.01                  | 224.64                               | 221.01                          | 24.61             | 485.01  | 167.19   | 653                       | 1143 |
| 4        | 558                            | 556        | 179.76                  | 183.62                               | 179.76                          | 24.11             | 391.17  | 166.83   | 558                       | 1144 |
| 3        | 346                            | 344        | 87.54                   | 92.06                                | 87.54                           | 23.18             | 179.95  | 166.05   | 346                       | 1145 |
| 2        | 252                            | 250        | 46.66                   | 53.44                                | 46.66                           | 22.01             | 90.85   | 161.15   | 252                       | 1146 |
| 1        | 172                            | 170        | 14.18                   | 22.61                                | 14.18                           | 20.98             | 9.72  | 152.28   | 172                       | 1147 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: collar defect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-4  
 DATE: 7-25-14  
 LOCATION: SPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: CLEAR

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 3502  
 PROJECT JPL PASADENA  
 OPERATOR(S) \_\_\_\_\_  
 ATM. PRESSURE (Patm): (start) 14.06 (finish) 14.09  
20.52 °C 19.03 °C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307 ft/psi | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 5        | 513                            | 511        | 177.41                  | 176.56                               | 177.41                          | 21.23             | 374.89  | 138.11   | 513                       | 0745 |
| 4        | 392                            | 390        | 124.73                  | 124.16                               | 124.73                          | 21.45             | 254.00  | 138.00   | 392                       | 0746 |
| 3        | 322                            | 320        | 94.23                   | 93.82                                | 94.23                           | 21.36             | 184.01  | 137.99   | 322                       | 0747 |
| 2        | 240                            | 238        | 58.47                   | 58.81                                | 58.47                           | 21.04             | 103.24  | 136.76   | 240                       | 0748 |
| 1        | 150                            | 149        | 19.22                   | 23.91                                | 19.22                           | 20.28             | 22.72   | 127.28   | 150                       | 0749 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-11  
 DATE: 7-25-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: clear

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) \_\_\_\_\_  
 ATM. PRESSURE (Patm): (start) 14.07 (finish) 14.06  
   19.91°C   18.68°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307 ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|--|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (oC) |  |  |                           |      |
| 5        | 639                            | 636        | 214.97                  | 193.31                               | 214.97                          | 21.27             | 413.51   | 225.49   | 639                       | 0847 |
| 4        | 524                            | 522        | 165.49                  | 161.01                               | 165.49                          | 20.71             | 339.00   | 185.61   | 524                       | 0848 |
| 3        | 429                            | 427        | 124.62                  | 118.33                               | 124.62                          | 20.59             | 240.53   | 188.47   | 429                       | 0849 |
| 2        | 259                            | 257        | 51.02                   | 48.77                                | 51.02                           | 19.96             | 80.05  | 178.95   | 259                       | 0850 |
| 1        | 149                            | 148        | 14.15                   | 24.44                                | 14.15                           | 19.25             | 23.92  | 125.08   | 149                       | 0851 |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |

Comments: collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-12  
 DATE: 7-25-14  
 LOCATION: SPL  
 ELEV. TOP OF WESTBAY CASING  
 WEATHER: CLEAR

PROBE TYPE Sampler 0-500 ps.  
 SERIAL NO. EMS 2502  
 PROJECT SPL, Pasadena  
 OPERATOR(S)  
 ATM. PRESSURE (Patm): (start) 14.09 (finish) 14.08  
   19.66°C                                   18.29°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307 ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|--|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |  |  |                           |      |
| 5        | 548                            | 547        | 206.03                  | 170.43                               | 206.03                          | 20.36             | 360.68   | 187.32   | 548                       | 0816 |
| 4        | 436                            | 435        | 157.38                  | 132.54                               | 157.38                          | 20.67             | 273.26   | 162.74   | 430                       | 0817 |
| 3        | 323                            | 322        | 108.21                  | 85.70                                | 108.21                          | 20.37             | 165.20   | 157.80   | 323                       | 0817 |
| 2        | 243                            | 242        | 73.41                   | 52.10                                | 73.41                           | 19.72             | 87.69  | 155.31   | 243                       | 0818 |
| 1        | 140                            | 139        | 28.44                   | 14.12                                | 28.44                           | 19.03             | 0.07   | 139.93   | 140                       | 0819 |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |

Comments: Collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-14  
 DATE: 7-25-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING \_\_\_\_\_  
 WEATHER: clear

PROBE TYPE Sampler 0-500 ps.  
 SERIAL NO. FMS 2502  
 PROJECT JPL Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) 14.06 (finish) 14.05  
24.89°C 20.40°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307 ft/psi | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 5        | 540                            | 539        | 171.31                  | 158.96                               | 171.31                          | 23.24             | 334.28  | 205.72   | 540                       | 1001 |
| 4        | 456                            | 455        | 134.72                  | 122.79                               | 134.72                          | 22.81             | 250.84  | 205.16   | 456                       | 1002 |
| 3        | 382                            | 381        | 102.53                  | 90.70                                | 102.53                          | 22.18             | 176.81  | 205.19   | 382                       | 1003 |
| 2        | 277                            | 276        | 56.79                   | 45.23                                | 56.79                           | 21.42             | 71.91   | 205.09   | 277                       | 1004 |
| 1        | 207                            | 206        | 26.27                   | 15.32                                | 26.27                           | 20.91             | 2.91  | 204.09   | 207                       | 1005 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 6" above sample port





**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-18  
 DATE: 7-25-14  
 LOCATION: SPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: clear

PROBE TYPE Sampler 0-500 ps.  
 SERIAL NO. EMS 2502  
 PROJECT SPL, Pasadena  
 OPERATOR(S) \_\_\_\_\_  
 ATM. PRESSURE (Patm): (start) 14.02 (finish) 14.03  
   23.81°C                            18.54°C

| Port No. | Depth to Meas. Port Valve (ft) |                  | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable       | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 5        | 684                            | 684 <sup>2</sup> | 185.30                  | 176.02                               | 185.30                          | 22.14             | 373.73  | 310.27   | 684                       | 1229 |
| 4        | 564                            | 562              | 132.86                  | 125.65                               | 132.86                          | 21.63             | 257.53  | 306.47   | 564                       | 1230 |
| 3        | 424                            | 422              | 72.03                   | 71.23                                | 72.03                           | 20.80             | 131.98  | 292.02   | 424                       | 1231 |
| 2        | 330                            | 328              | 31.01                   | 32.70                                | 31.01                           | 19.89             | 43.09   | 286.91   | 330                       | 1232 |
| 1        | 270                            | 268              | 14.15                   | 14.13                                | 14.15                           | 19.19             | 0.25  | 269.75   | 270                       | 1233 |
|          |                                |                  |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |                  |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |                  |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |                  |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |                  |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |                  |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |                  |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar at 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-19  
 DATE: 7-25-14  
 LOCATION: SPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: clear

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. FMS 2502  
 PROJECT SPL, Pasadena  
 OPERATOR(S) \_\_\_\_\_  
 ATM. PRESSURE (Patm): (start) 14.07 (finish) 14.05  
   25.24°C                                   18.88°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (oC) |   |  |                           |      |
| 5        | 498                            | 496        | 171.36                  | 131.40                               | 171.36                          | 22.24             | 270.68  | 227.32   | 496                       | 1110 |
| 4        | 444                            | 442        | 148.03                  | 108.13                               | 148.03                          | 21.72             | 217.00  | 227.00   | 444                       | 1111 |
| 3        | 392                            | 390        | 125.43                  | 95.57                                | 125.43                          | 21.19             | 187.88  | 204.12   | 392                       | 1112 |
| 2        | 314                            | 312        | 91.53                   | 61.89                                | 91.53                           | 20.76             | 110.32  | 203.68   | 314                       | 1113 |
| 1        | 242                            | 240        | 60.28                   | 37.64                                | 60.28                           | 20.14             | 42.84   | 199.16   | 242                       | 1114 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 6" above sample port

WESTBAY™ GROUNDWATER MONITORING WELL  
 WATER LEVEL MEASUREMENT LOG SHEET

WELL ID: MW-20

PROBE TYPE Sampler 0-500 psi

DATE: 7-25-14

SERIAL NO. EMS 2502

LOCATION: JPL

PROJECT JPL, Pasadena

ELEV. TOP OF WESTBAY CASING

OPERATOR(S) AW

WEATHER: clear

ATM. PRESSURE (Patm): (start) 14.02 (finish) 14.05

27.04 °C

18.88 °C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307 ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|--|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |  |  |                           |      |
| 5        | 900                            | 896        | 320.77                  | 305.64                               | 320.77                          | 23.90             | 672.77   | 227.23   | 900                       | 1250 |
| 4        | 700                            | 696        | 234.18                  | 206.32                               | 234.18                          | 23.59             | 443.64   | 256.36   | 700                       | 1251 |
| 3        | 562                            | 559        | 174.38                  | 149.12                               | 174.38                          | 22.86             | 311.68   | 250.32   | 562                       | 1252 |
| 2        | 392                            | 389        | 100.69                  | 81.44                                | 100.69                          | 21.47             | 155.54   | 236.46   | 392                       | 1253 |
| 1        | 230                            | 227        | 30.31                   | 14.13                                | 30.31                           | 19.81             | 0.25   | 229.75   | 230                       | 1254 |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |

Comments:

**Blaine Tech Services, Inc. 1680 Rogers Ave., San Jose, CA 95112 (800) 545-7558**

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-21  
 DATE: 7-25-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: clear

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) \_\_\_\_\_  
 ATM. PRESSURE (Patm): (start) 14.09 (finish) 14.09  
   27.90  20.81

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P2 - Patm) * 2.307$<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp - P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (oC) |   |  |                           |      |
| 5        | 372                            | 371        | 125.43                  | 133.54                               | 125.43                          | 25.00             | 275.57  | 96.43  | 372                       | 1039 |
| 4        | 310                            | 309        | 98.47                   | 106.69                               | 98.47                           | 23.81             | 213.63  | 96.37  | 310                       | 1040 |
| 3        | 240                            | 240        | 68.44                   | 76.88                                | 68.44                           | 22.64             | 144.86  | 95.14  | 240                       | 1041 |
| 2        | 161                            | 161        | 34.03                   | 42.78                                | 34.03                           | 21.82             | 66.19   | 94.81  | 161                       | 1042 |
| 1        | 90                             | 90         | 14.13                   | 14.07                                | 14.13                           | 21.19             | -0.05   | 90.05  | 90                        | 1043 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-22  
 DATE: 7-31-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: Clear

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) 14.01 (finish) \_\_\_\_\_  
26.68°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (oC) |   |  |                           |      |
| 5        | 588                            | 585        | 201.31                  | 167.81                               | 201.31                          | 22.28             | 354.82  | 233.18   | 588                       | 0625 |
| 4        | 467                            | 465        | 148.89                  | 118.20                               | 148.89                          | 22.22             | 240.37  | 226.63   | 467                       | 0628 |
| 3        | 389                            | 387        | 114.99                  | 88.64                                | 114.99                          | 21.76             | 172.17  | 216.83   | 389                       | 0630 |
| 2        | 329                            | 328        | 89.02                   | 62.47                                | 89.02                           | 20.94             | 111.80  | 217.20   | 329                       | 0632 |
| 1        | 245                            | 244        | 52.11                   | 76.53                                | 52.11                           | 20.20             | 28.88   | 216.12   | 245                       | 0634 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 1' above sample part

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-23  
 DATE: 7-25-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: Clear

PROBE TYPE Sampler 0-500 PSI  
 SERIAL NO. EMS2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) 14.08 (finish) 14.08  
21.47°C (FWS) 20.78°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P2 - Patm) * 2.307$<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp - P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 5        | 542                            | 541        | 202.20                  | 177.82                               | 202.20                          | 23.27             | 376.39  | 165.61   | 542                       | 0649 |
| 4        | 445                            | 444        | 160.17                  | 135.86                               | 160.17                          | 22.84             | 279.68  | 165.32   | 445                       | 0650 |
| 3        | 319                            | 318        | 105.64                  | 85.89                                | 105.64                          | 22.30             | 164.26  | 154.74   | 319                       | 0651 |
| 2        | 254                            | 254        | 77.44                   | 57.78                                | 77.44                           | 21.76             | 99.43   | 154.57   | 254                       | 0652 |
| 1        | 174                            | 174        | 42.71                   | 24.73                                | 42.71                           | 21.21             | 23.05   | 150.95   | 174                       | 0653 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-24  
 DATE: 7-25-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: clear

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 2507  
 PROJECT JPL, Pasadena  
 OPERATOR(S) \_\_\_\_\_  
 ATM. PRESSURE (Patm): (start) 14.03 (finish) 14.04  
23.99°C 22.47°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sup>2</sup> O Inside Casing | Trans. Temp. (oC) |   |  |                           |      |
| 5        | 678                            | 675        | 219.67                  | 190.44                               | 219.67                          | 23.42             | 406.98  | 271.02   | 678                       | 0939 |
| 4        | 554                            | 551        | 166.02                  | 141.55                               | 166.02                          | 23.10             | 294.19  | 259.81   | 554                       | 0940 |
| 3        | 435                            | 433        | 114.48                  | 94.70                                | 114.48                          | 22.57             | 186.11  | 246.89   | 435                       | 0942 |
| 2        | 373                            | 371        | 87.62                   | 68.24                                | 87.62                           | 22.38             | 125.06  | 247.94   | 373                       | 0942 |
| 1        | 279                            | 277        | 46.81                   | 29.62                                | 46.81                           | 22.29             | 35.97   | 243.03   | 279                       | 0943 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-25  
 DATE: 7-25-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: clear

PROBE TYPE Sampler 0-500 psi.  
 SERIAL NO. EMS 2502  
 PROJECT JPL Pasadena  
 OPERATOR(S) Ans  
 ATM. PRESSURE (Patm): (start) 14.17 (finish) 14.17  
   26.43 °C                               21.18 °C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307 ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|--|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (oC) |  |  |                           |      |
| 5        | 713                            | 710        | 211.48                  | 216.16                               | 211.48                          | 24.49             | 405.99   | 247.01   | 713                       | 1356 |
| 4        | 633                            | 630        | 177.01                  | 179.90                               | 177.01                          | 24.01             | 382.34   | 250.66   | 633                       | 1357 |
| 3        | 503                            | 500        | 120.82                  | 126.72                               | 120.82                          | 23.17             | 259.65   | 243.35   | 503                       | 1358 |
| 2        | <sup>collar</sup> 423          | 420        | 85.99                   | 95.35                                | 85.99                           | 22.57             | 187.28   | 235.72   | 423                       | 1359 |
| 1        | 358                            | 355        | 57.83                   | 68.52                                | 57.83                           | 21.98             | 125.39   | 232.61   | 358                       | 1400 |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |

Comments: Collar detect at 2' below sample port



**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-26  
 DATE: 7-25-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING  
 WEATHER: clear

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. FMS 2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S)  
 ATM. PRESSURE (Patm): (start) 14.10 (finish) 14.10  
30.26 °C 24.05 °C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307 ft/psi | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 2        | 215                            | 212        | 79.10                   | 56.93                                | 79.10                           | 27.22             | 98.81   | 116.19   | 215                       | 1339 |
| 1        | 135                            | 132        | 44.29                   | 22.91                                | 44.29                           | 25.39             | 20.32   | 114.68   | 135                       | 1340 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 2' below sample port

## WELL GAUGING DATA

Project # 140725-AW1 Date 8-8-14 Client Tide water

Site JPL, Pasadena

| Well ID | Time | Well Size (in.) | Sheen / Odor | Depth to Immiscible Liquid (ft.) | Thickness of Immiscible Liquid (ft.) | Volume of Immiscibles Removed (ml) | Depth to water (ft.) | Depth to well bottom (ft.) | Survey Point: TOB or TOC | Notes |
|---------|------|-----------------|--------------|----------------------------------|--------------------------------------|------------------------------------|----------------------|----------------------------|--------------------------|-------|
| MW-1    | 0907 | 4               |              |                                  |                                      |                                    | 33.93                | Pump                       |                          |       |
| MW-5    | 0634 | 4               |              |                                  |                                      |                                    | 116.41               |                            |                          |       |
| MW-6    | 0814 | 4               |              |                                  |                                      |                                    | 222.86               |                            |                          |       |
| MW-7    | 0722 | 4               |              |                                  |                                      |                                    | 256.57               |                            |                          |       |
| MW-8    | 0750 | 4               |              |                                  |                                      |                                    | 183.06               |                            |                          |       |
| MW-9    | 0911 | 4               |              |                                  |                                      |                                    | 25.48                |                            |                          |       |
| MW-10   | 0627 | 4               |              |                                  |                                      |                                    | 131.91               |                            |                          |       |
| MW-13   | 0642 | 4               |              |                                  |                                      |                                    | 225.81               |                            |                          |       |
| MW-15   | 0707 | 4               |              |                                  |                                      |                                    | 38.40                |                            |                          |       |
| MW-16   | 0714 | 4               |              |                                  |                                      |                                    | 278.06               | ↓                          | ↓                        |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |
|         |      |                 |              |                                  |                                      |                                    |                      |                            |                          |       |

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-3  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: \_\_\_\_\_  
 WEATHER: Hazy

PROBE TYPE: Sampler 0-500 ps.  
 SERIAL NO.: EMS 2502  
 PROJECT: JPL, Pasadena  
 OPERATOR(S): AW  
 ATM. PRESSURE (Patm): (start) 14.08 (finish) 14.12  
   20.06 °C                     19.45 °C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307 ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|--|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |  |  |                           |      |
| 5        | 653                            | 652        | 220.96                  | 224.11                               | 220.96                          | 20.66             | 404.54   | 148.46   | 653                       | 0925 |
| 4        | 558                            | 557        | 179.69                  | 183.10                               | 179.69                          | 21.30             | 389.93   | 148.07   | 558                       | 0926 |
| 3        | 346                            | 345        | 87.44                   | 91.58                                | 87.44                           | 21.35             | 178.79   | 147.21   | 346                       | 0927 |
| 2        | 252                            | 252        | 46.54                   | 52.98                                | 46.54                           | 21.01             | 89.74  | 142.26   | 252                       | 0928 |
| 1        | 172                            | 172        | 14.22                   | 21.96                                | 14.22                           | 20.31             | 18.18  | 153.82   | 172                       | 0929 |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |

Comments: Collar detect -> 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-4  
 DATE: 8-8-14  
 LOCATION: \_\_\_\_\_  
 ELEV. TOP OF WASTBAY CASING \_\_\_\_\_  
 WEATHER: \_\_\_\_\_

PROBE TYPE \_\_\_\_\_  
 SERIAL NO. \_\_\_\_\_  
 PROJECT \_\_\_\_\_  
 OPERATOR(S) \_\_\_\_\_  
 ATM. PRESSURE (P<sub>atm</sub>): (start) \_\_\_\_\_ (finish) \_\_\_\_\_

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                      |                     |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P_2 - P_{atm}) * 2.307$<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp.P(ft) | True Port Depth (Dp) (ft) | Time   |
|----------|--------------------------------|------------|-------------------------|----------------------|---------------------|-------------------|---|--|---------------------------|--|
|          | From Log (Dp)                  | From Cable | Inside Casing (psi)     | Outside Casing (psi) | Inside Casing (psi) | Trans. Temp. (oC) |   |  |                           |  |
| -        | Unable to access               |            |                         |                      |                     |                   |   |  |                           | due to construction of JPL Parking structure |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |
|          |                                |            |                         |                      |                     |                   |   |  |                           |  |

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

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-11  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING \_\_\_\_\_  
 WEATHER: overcast

PROBE TYPE Sampler 0-500 ps.  
 SERIAL NO. EMS 2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) Aw  
 ATM. PRESSURE (Patm): (start) 14.04 (finish) 14.08  
19.39°C 18.53°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P2 - Patm) * 2.307$<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp - P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (oC) |   |  |                           |      |
| 5        | 639                            | 637        | 209.98                  | 192.74                               | 209.98                          | 19.80             | 412.26  | 224.74   | 639                       | 0654 |
| 4        | 524                            | 522        | 160.40                  | 160.42                               | 160.40                          | 20.38             | 337.70  | 186.30   | 524                       | 0655 |
| 3        | 429                            | 427        | 119.58                  | 117.74                               | 119.58                          | 20.04             | 239.24  | 189.76   | 429                       | 0656 |
| 2        | 259                            | 257        | 45.86                   | 48.23                                | 45.86                           | 19.51             | 78.88   | 180.12   | 259                       | 0658 |
| 1        | 149                            | 148        | 14.17                   | 24.10                                | 14.17                           | 18.95             | 23.21   | 125.79   | 149                       | 0659 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-17  
 DATE: 8-8-14  
 LOCATION: \_\_\_\_\_  
 ELEV. TOP OF WASTBAY CASING \_\_\_\_\_  
 WEATHER: \_\_\_\_\_

PROBE TYPE \_\_\_\_\_  
 SERIAL NO. \_\_\_\_\_  
 PROJECT \_\_\_\_\_  
 OPERATOR(S) \_\_\_\_\_  
 ATM. PRESSURE (Patm): (start) \_\_\_\_\_ (finish) \_\_\_\_\_

| Port No. | Depth to Meas. Port Valve (ft)                               |            | Pressure Readings (psi) |                      |                     |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P2 - Patm) * 2.307$<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp - P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--|------------|-------------------------|----------------------|---------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)  | From Cable | Inside Casing (psi)     | Outside Casing (psi) | Inside Casing (psi) | Trans. Temp. (oC) |   |  |                           |      |
|          | - Unable to access due to JPL Parking Structure Construction |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |
|          |  |            |                         |                      |                     |                   |   |  |                           |      |

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

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-14  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WASTBAY CASING \_\_\_\_\_  
 WEATHER: overcast

PROBE TYPE Sampler 0-500 ps  
 SERIAL NO. EMS 2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) Aw  
 ATM. PRESSURE (Patm): (start) 14.04 (finish) 14.05  
20.91°C 19.78°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P2 - Patm) * 2.307$<br>ft/psi | Depth to Water Outside Port (ft)<br>DTW = Dp - P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|--|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |  |  |                           |      |
| 5        | 540                            | 540        | 171.03                  | 158.28                               | 171.03                          | 20.86             | 332.76   | 207.24   | 540                       | 0800 |
| 4        | 456                            | 456        | 134.51                  | 122.08                               | 134.51                          | 20.98             | 249.25   | 206.75   | 456                       | 0801 |
| 3        | 382                            | 382        | 108.23                  | 90.01                                | 108.23                          | 20.76             | 175.26   | 206.74   | 382                       | 0802 |
| 2        | 277                            | 277        | 56.57                   | 44.51                                | 56.57                           | 20.38             | 70.29  | 206.71   | 277                       | 0803 |
| 1        | 207                            | 207        | 26.03                   | 14.52                                | 26.03                           | 20.02             | 1.11   | 205.89   | 207                       | 0804 |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |  |  |                           |      |

Comments: collar defect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: Mw-17  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: \_\_\_\_\_

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 2502  
 PROJECT JPL Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) \_\_\_\_\_ (finish) \_\_\_\_\_

| Port No. | Depth to Meas. Port Valve (ft)         |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P2 - Patm) * 2.307$<br>ft/psi | Depth to Water Outside Port (ft)<br>DTW = Dp - P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|--|--|---------------------------|------|
|          | From Log (Dp)                          | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (oC) |  |  |                           |      |
|          | Car parked over well. Unable to access |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |
|          |  |            |                         |                                      |                                 |                   |  |  |                           |      |

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



**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-18  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: \_\_\_\_\_  
 WEATHER: Hazy

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 2502  
 PROJECT JPL Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) 13.99 (finish) 14.00  
19.90°C 18.14°C

| Port No. | Depth to Meas. Port Valve (ft) |                     | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307<br>ft/psi | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|---------------------|-------------------------|--------------------------------------|---------------------------------|-------------------|--|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable          | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (oC) |  |  |                           |      |
| 5        | 684                            | 684 <sup>64</sup> 2 | 185.62                  | 175.61                               | 185.62                          | 20.52             | 372.80   | 311.14   | 604                       | 0945 |
| 4        | 564                            | 562                 | 132.60                  | 125.21                               | 132.60                          | 20.73             | 256.58   | 357.42   | 564                       | 0946 |
| 3        | 424                            | 423                 | 71.78                   | 70.76                                | 71.78                           | 20.16             | 130.97   | 295.03   | 424                       | 0947 |
| 2        | 330                            | 329                 | 30.81                   | 32.22                                | 30.81                           | 19.24             | 42.06  | 287.94   | 330                       | 0948 |
| 1        | 270                            | 269                 | 14.19                   | 14.18                                | 14.19                           | 18.67             | 0.44   | 269.56   | 270                       | 0949 |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |
|          |                                |                     |                         |                                      |                                 |                   |  |  |                           |      |

Comments: Collar at 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: WV-19  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING:  
 WEATHER: overcast

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 2502  
 PROJECT JPL Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) 14.06 (finish) 14.09  
19.42°C 18.17°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (oC) |   |  |                           |      |
| 5        | 498                            | 496        | 171.30                  | 130.66                               | 171.30                          | 19.11             | 269.00  | 229.00   | 498                       | 0856 |
| 4        | 444                            | 442        | 143.59                  | 108.64                               | 143.59                          | 19.15             | 218.20  | 225.80   | 444                       | 0857 |
| 3        | 392                            | 391        | 125.21                  | 94.92                                | 125.21                          | 19.16             | 186.54  | 205.46   | 392                       | 0858 |
| 2        | 314                            | 312        | 91.48                   | 61.32                                | 91.48                           | 19.18             | 149.03  | 204.97   | 314                       | 0859 |
| 1        | 242                            | 240        | 60.18                   | 32.04                                | 60.18                           | 18.97             | 41.48   | 200.52   | 242                       | 0900 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 6" above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-20  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING: \_\_\_\_\_  
 WEATHER: Hazy

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EM) 2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) 14.10 (finish) 14.08  
   70.48°C  18.00°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 5        | 900                            | 899        | 320.68                  | 305.19                               | 320.68                          | 21.09             | 671.54  | 228.46   | 900                       | 1005 |
| 4        | 700                            | 699        | 234.02                  | 209.00                               | 234.02                          | 21.92             | 449.63  | 250.37   | 700                       | 1006 |
| 3        | 562                            | 561        | 174.12                  | 147.29                               | 174.12                          | 20.75             | 307.27  | 254.   | 562                       | 1007 |
| 2        | 392                            | 391        | 100.61                  | 80.64                                | 100.61                          | 20.03             | 153.51  | 238.49   | 392                       | 1008 |
| 1        | 230                            | 229        | 30.17                   | 14.17                                | 30.17                           | 18.74             | 0.16  | 229.84   | 230                       | 1009 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

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

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-21  
DATE: 8-8-14  
LOCATION: JPL  
ELEV. TOP OF WESTBAY CASING  
WEATHER: overcast

PROBE TYPE Sampler 0.500 psi  
SERIAL NO. EMS 2502  
PROJECT JPL Pasadena  
OPERATOR(S) AW  
ATM. PRESSURE (Patm): (start) 14.09 (finish) 14.10  
19.45°C 19.18°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P2 - Patm) * 2.307$<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp - P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 5        | 372                            | 371        | 125.36                  | 132.84                               | 125.36                          | 19.49             | 273.96  | 98.04  | 372                       | 0828 |
| 4        | 310                            | 309        | 98.22                   | 106.00                               | 98.22                           | 19.70             | 212.04  | 97.96  | 310                       | 0829 |
| 3        | 240                            | 240        | 68.23                   | 76.16                                | 68.23                           | 19.64             | 143.20  | 96.80  | 240                       | 0830 |
| 2        | 161                            | 161        | 33.84                   | 42.07                                | 33.84                           | 19.42             | 64.55   | 96.45  | 161                       | 0831 |
| 1        | 90                             | 89         | 14.19                   | 14.17                                | 14.19                           | 19.24             | 0.18  | 89.82  | 90                        | 0832 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: collar detect is 2' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-22  
 DATE: 8-8-14  
 LOCATION: \_\_\_\_\_  
 ELEV. TOP OF WASTBAY CASING \_\_\_\_\_  
 WEATHER: \_\_\_\_\_

PROBE TYPE \_\_\_\_\_  
 SERIAL NO. \_\_\_\_\_  
 PROJECT \_\_\_\_\_  
 OPERATOR(S) \_\_\_\_\_  
 ATM. PRESSURE (Patm): (start) \_\_\_\_\_ (finish) \_\_\_\_\_

| Port No. | Depth to Meas. Port Valve (ft)              |            | Pressure Readings (psi) |                      |                     |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P2 - Patm) * 2.307$<br>ft/psi | Depth to Water Outside Port (ft)<br>DTW = Dp - P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|---|------------|-------------------------|----------------------|---------------------|-------------------|--|--|---------------------------|------|
|          | From Log (Dp)                               | From Cable | Inside Casing (psi)     | Outside Casing (psi) | Inside Casing (psi) | Trans. Temp. (oC) |  |  |                           |      |
|          | - Parking lot closed where well is located. |            |                         |                      |                     |                   |  |  |                           |      |
|          | - Unable to access                          |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |
|          |   |            |                         |                      |                     |                   |  |  |                           |      |

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

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-73  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: Overcast

PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EMS 2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) Aw  
 ATM. PRESSURE (Patm): (start) 14.01 (finish) 14.04  
24.25 °C 20.75 °C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307 ft/psi | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sup>2</sup> O Inside Casing | Trans. Temp. (oC) |   |  |                           |      |
| 5        | 542                            | 540        | 202.01                  | 177.16                               | 202.01                          | 22.70             | 376.39  | 165.61   | 542                       | 0610 |
| 4        | 445                            | 443        | 160.14                  | 135.24                               | 160.14                          | 22.56             | 279.68  | 165.32   | 445                       | 0612 |
| 3        | 319                            | 318        | 105.56                  | 85.21                                | 105.56                          | 22.13             | 164.26  | 154.74   | 319                       | 0613 |
| 2        | 254                            | 253        | 72.34                   | 57.11                                | 72.34                           | 21.73             | 99.47   | 154.57   | 254                       | 0614 |
| 1        | 174                            | 173        | 42.60                   | 24.00                                | 42.60                           | 21.21             | 23.05   | 150.95   | 174                       | 0615 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 1' above sample port

**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-24  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: Overcast

PROBE TYPE Sampler 0-500 psi.  
 SERIAL NO. EMS 2502  
 PROJECT JPL Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) 14.07 (finish) 14.04  
18.83 °C 21.80 °C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sup>2</sup> O Inside Casing | Trans. Temp. (oC) |   |  |                           |      |
| 5        | 678                            | 676        | 219.32                  | 189.87                               | 219.32                          | 20.56             | 405.57  | 272.43   | 678                       | 0739 |
| 4        | 554                            | 552        | 165.68                  | 140.96                               | 165.68                          | 21.07             | 292.74  | 261.26   | 554                       | 0740 |
| 3        | 435                            | 434        | 114.17                  | 94.07                                | 114.17                          | 21.22             | 184.56  | 250.44   | 435                       | 0741 |
| 2        | 373                            | 372        | 87.30                   | 67.67                                | 87.30                           | 21.28             | 123.66  | 249.34   | 373                       | 0742 |
| 1        | 279                            | 278        | 46.56                   | 29.19                                | 46.56                           | 21.43             | 34.88   | 244.12   | 279                       | 0743 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: collar detect is 6" above sample port

WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET

WELL ID: MW-25  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING  
 WEATHER: Hazy

PROBE TYPE Sampler 0-500 psi.  
 SERIAL NO. EMS 2502  
 PROJECT JPL, Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (P<sub>atm</sub>): (start) 14.70 (finish) 14.70  
23.50°C 20.63°C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>$P(ft) = (P_2 - P_{atm}) * 2.307$<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp - P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 5        | 713                            | 712        | 211.34                  | 215.63                               | 211.34                          | 22.45             | 464.70  | 248.30   | 713                       | 1054 |
| 4        | 633                            | 632        | 176.84                  | 179.55                               | 176.84                          | 22.42             | 381.46  | 251.54   | 633                       | 1055 |
| 3        | 503                            | 502        | 120.62                  | 126.33                               | 120.62                          | 21.99             | 258.68  | 244.32   | 503                       | 1056 |
| 2        | 423                            | 422        | 85.92                   | 94.93                                | 85.92                           | 21.53             | 186.24  | 236.76   | 423                       | 1057 |
| 1        | 358                            | 357        | 57.64                   | 68.11                                | 57.64                           | 21.16             | 124.37  | 233.63   | 358                       | 1058 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

Comments: Collar detect is 2' below sample port



**WESTBAY™ GROUNDWATER MONITORING WELL  
WATER LEVEL MEASUREMENT LOG SHEET**

WELL ID: MW-26  
 DATE: 8-8-14  
 LOCATION: JPL  
 ELEV. TOP OF WESTBAY CASING \_\_\_\_\_  
 WEATHER: Hazy

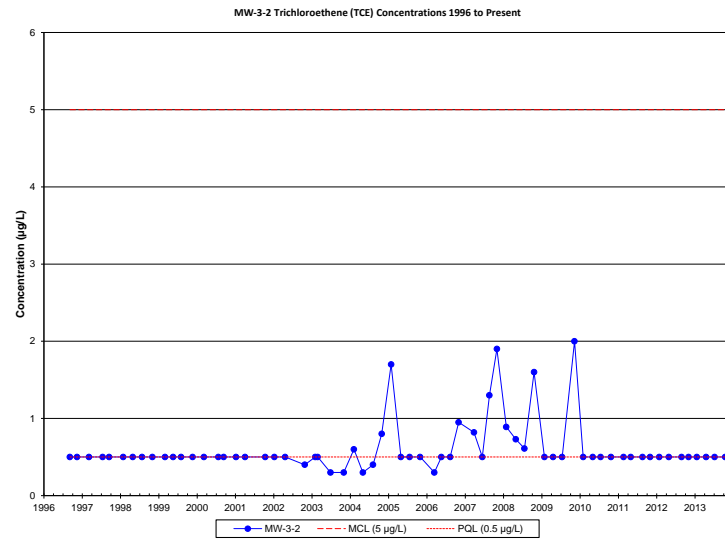
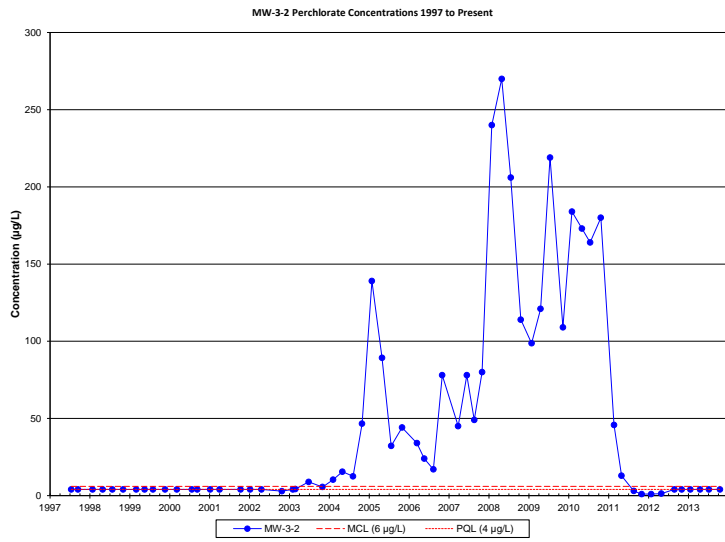
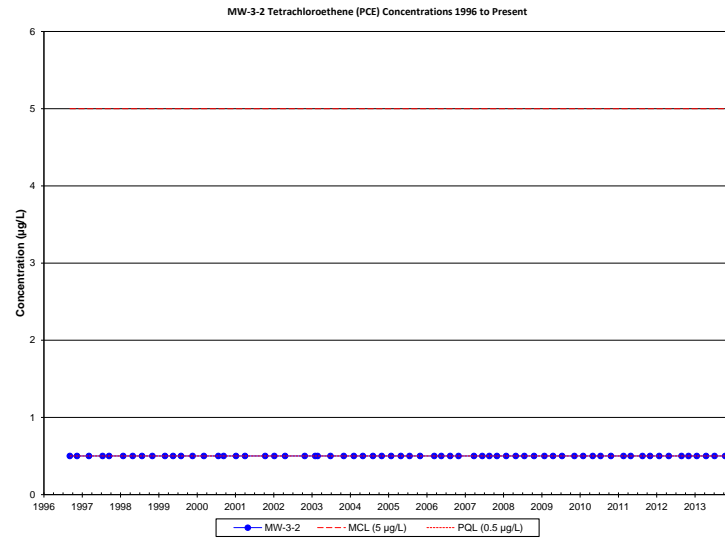
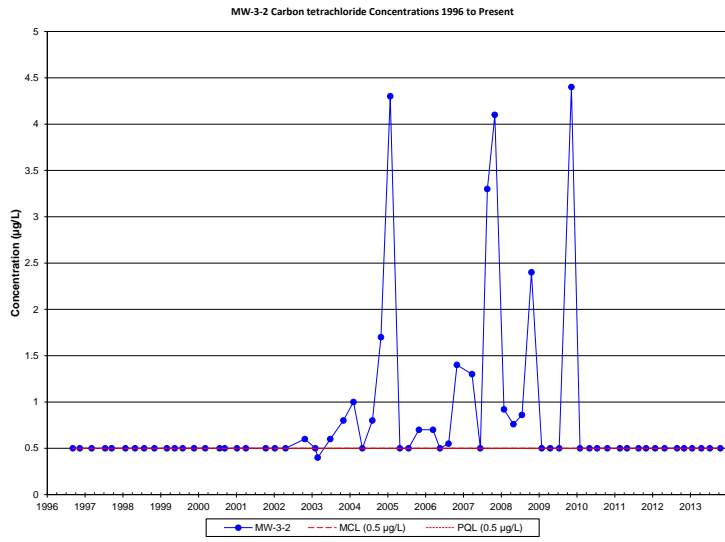
PROBE TYPE Sampler 0-500 psi  
 SERIAL NO. EM5 2502  
 PROJECT JPL Pasadena  
 OPERATOR(S) AW  
 ATM. PRESSURE (Patm): (start) 14.10 (finish) 14.12  
23.59 °C 20.94 °C

| Port No. | Depth to Meas. Port Valve (ft) |            | Pressure Readings (psi) |                                      |                                 |                   | Pressure Head Outside Port (ft)<br>P(ft)=(P2-Patm)*2.307<br>ft/psi) | Depth to Water Outside Port (ft)<br>DTW = Dp-P(ft) | True Port Depth (Dp) (ft) | Time |
|----------|--------------------------------|------------|-------------------------|--------------------------------------|---------------------------------|-------------------|---|--|---------------------------|------|
|          | From Log (Dp)                  | From Cable | psi Inside Casing       | kg/cm <sup>2</sup> Outside Casing P2 | mH <sub>2</sub> O Inside Casing | Trans. Temp. (°C) |   |  |                           |      |
| 2        | 215                            | 212        | 78.96                   | 56.48                                | 78.96                           | 22.46             | 97.77   | 117.23   | 215                       | 1029 |
| 1        | 135                            | 132        | 44.09                   | 22.54                                | 44.09                           | 21.63             | 19.47   | 115.53   | 135                       | 1030 |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |
|          |                                |            |                         |                                      |                                 |                   |   |  |                           |      |

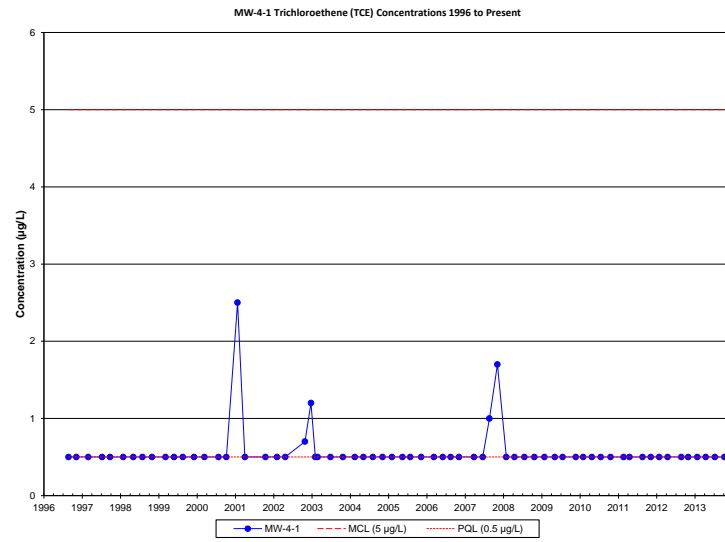
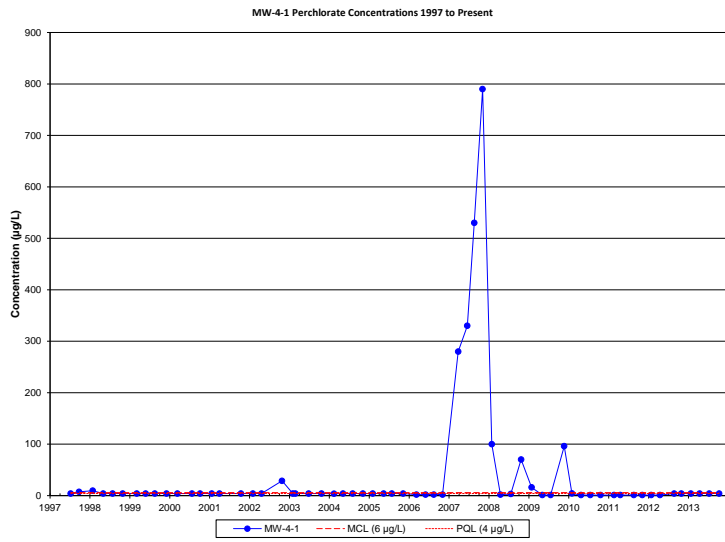
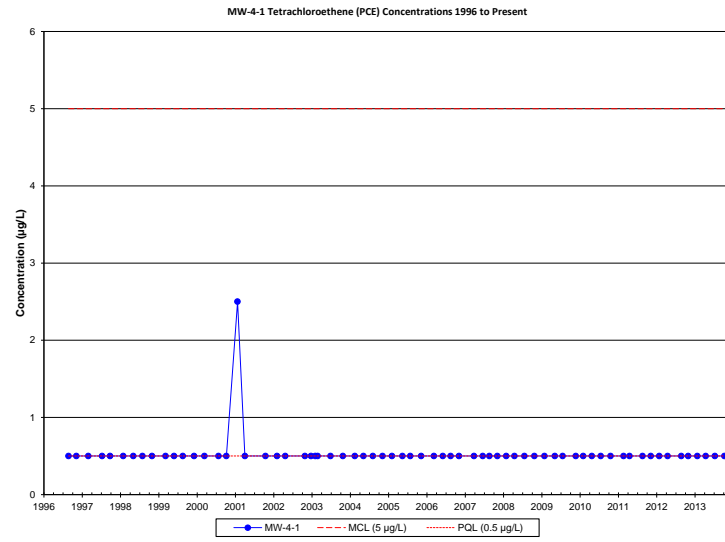
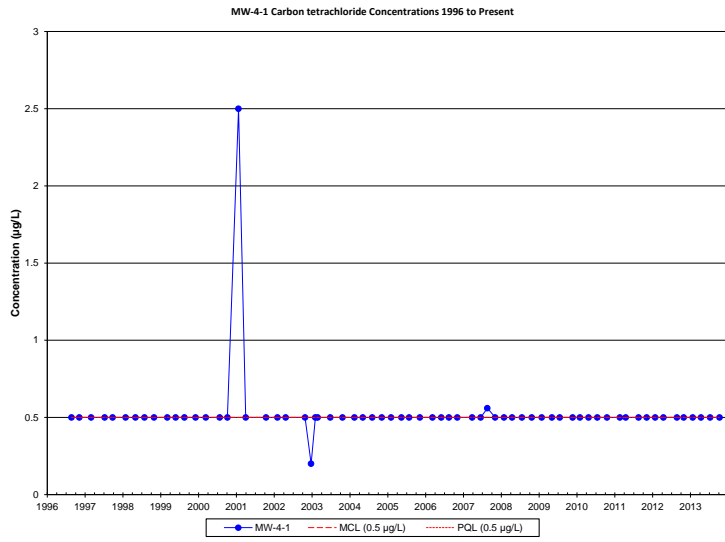
Comments: Collar defect => 2' below sample port

## **ATTACHMENT 6: TIME SERIES PLOTS**

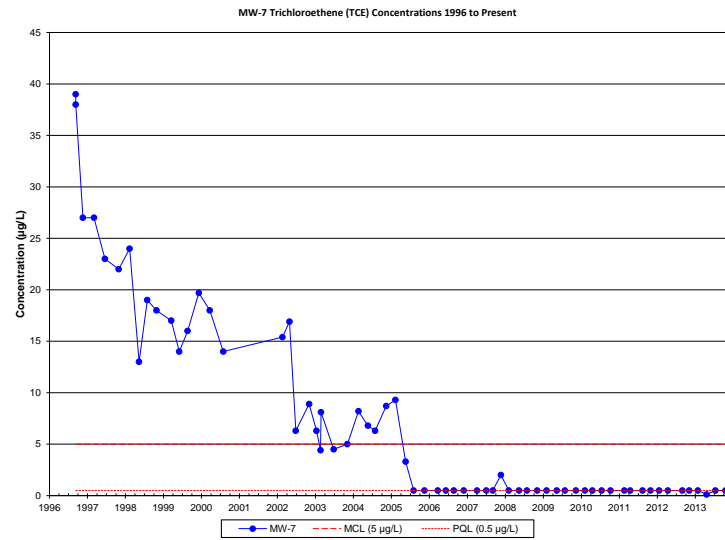
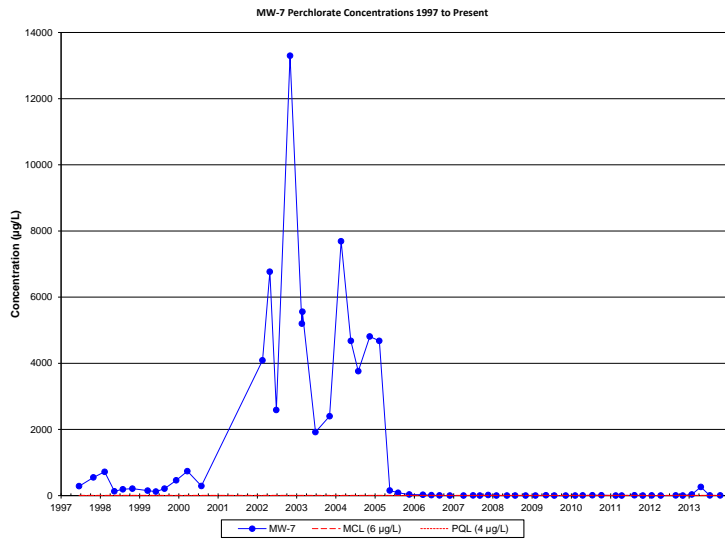
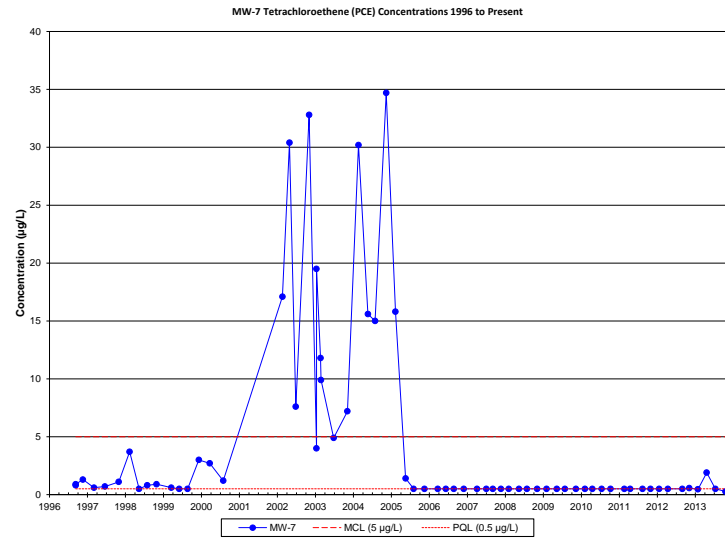
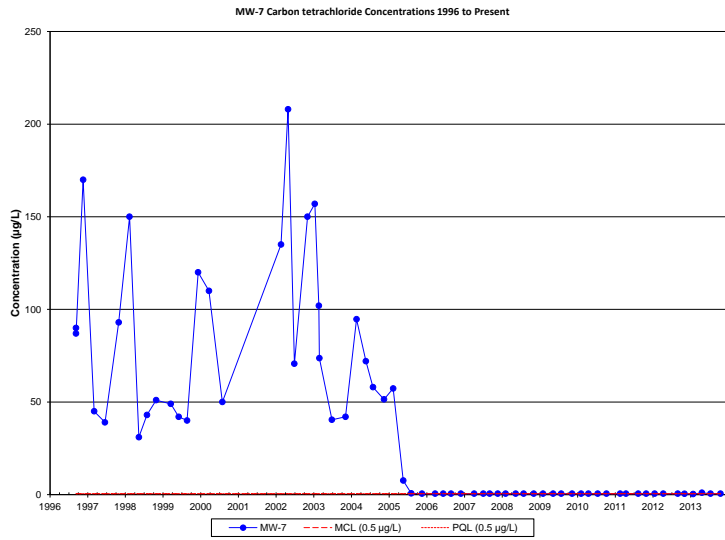
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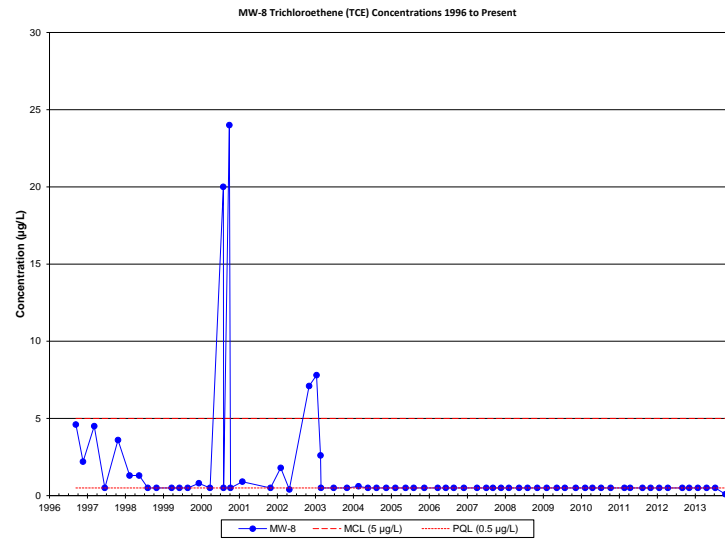
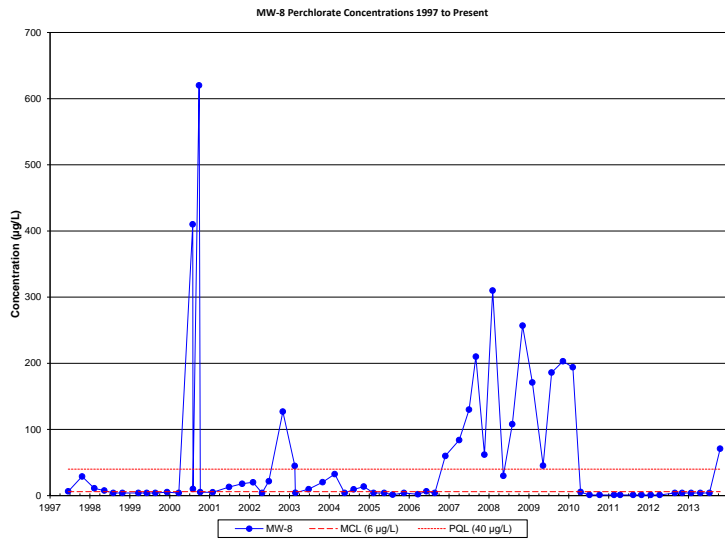
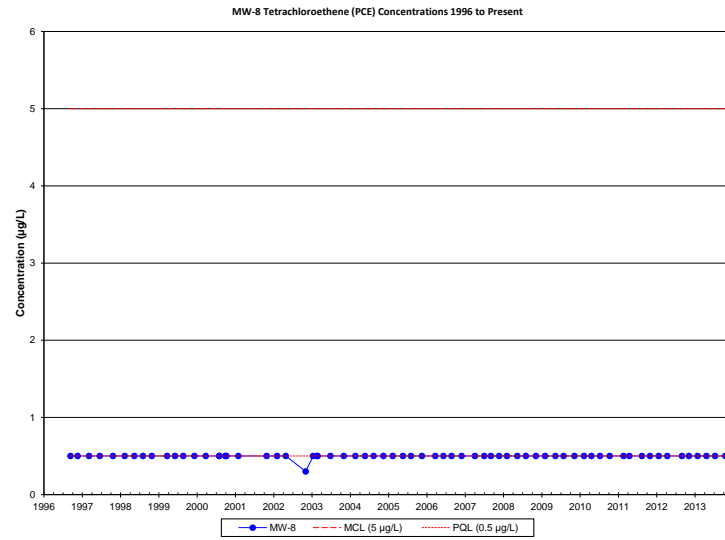
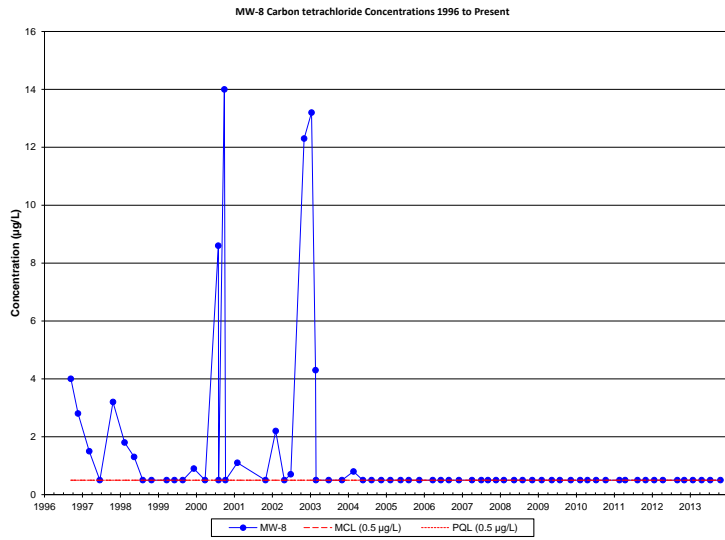
VOCs and Perchlorate Time Series Plots for MW-3-2



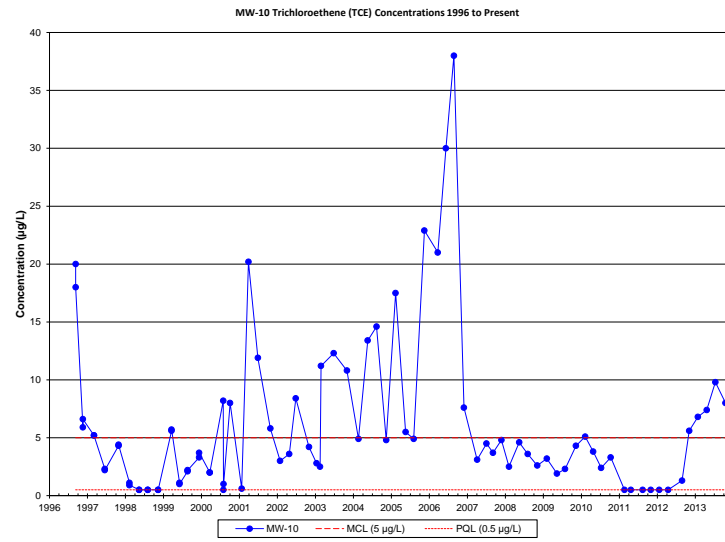
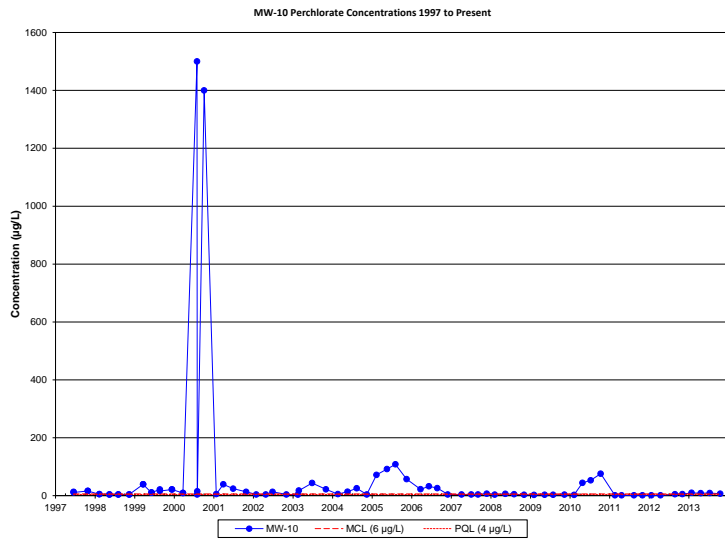
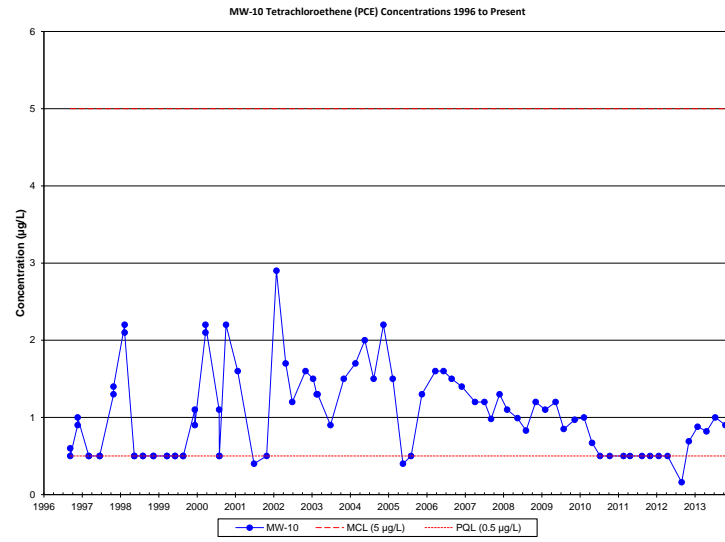
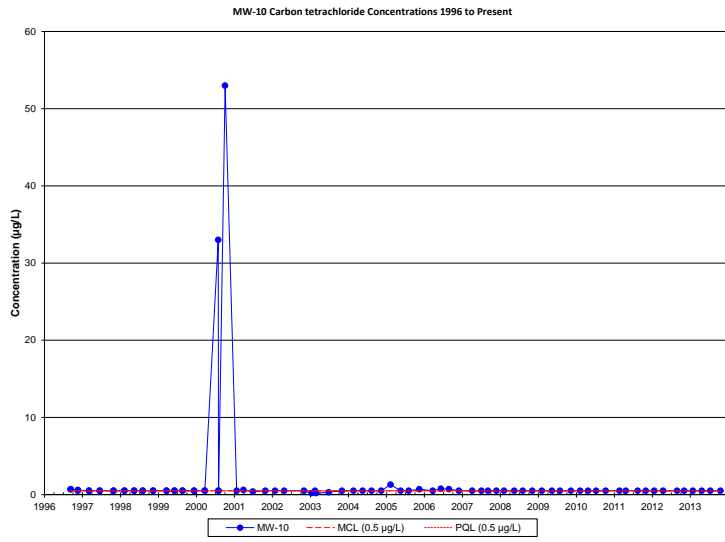
VOCs and Perchlorate Time Series Plots for MW-4-1



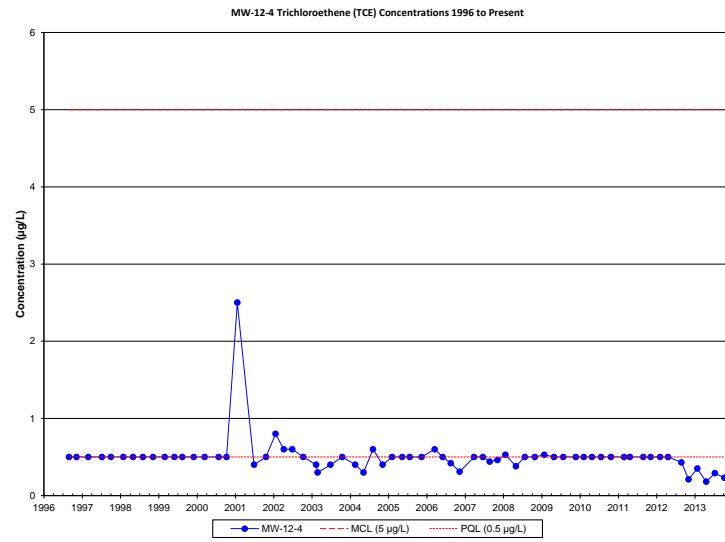
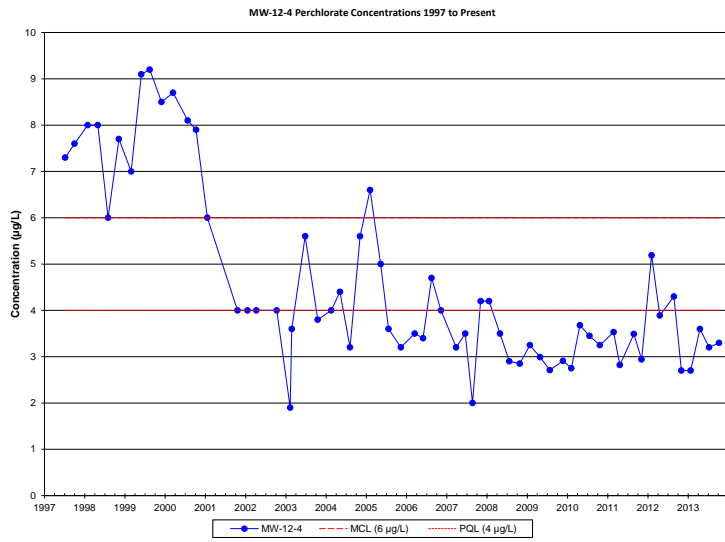
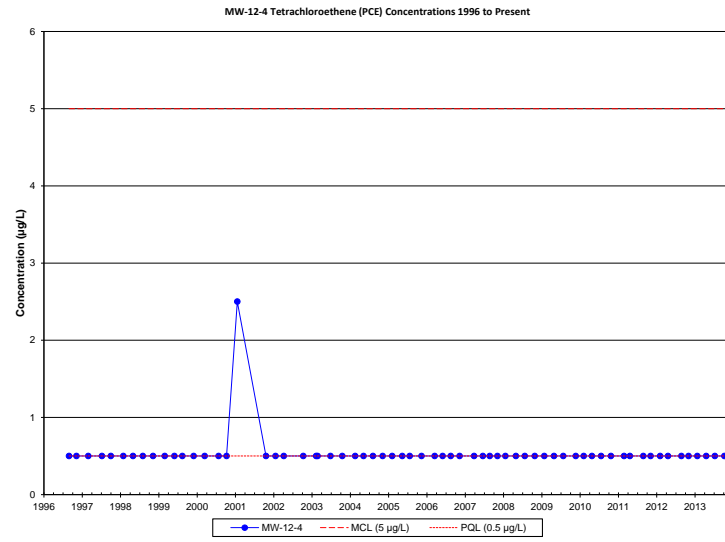
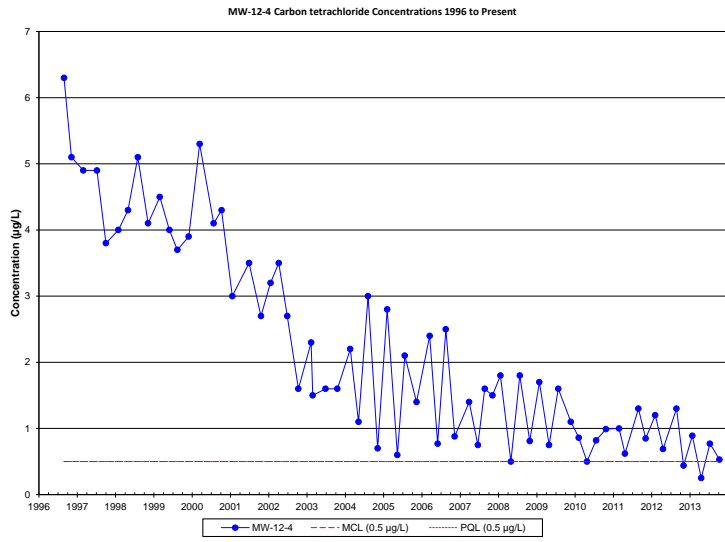
**VOCs and Perchlorate Time Series Plots for MW-7**



**VOCs and Perchlorate Time Series Plots for MW-8**

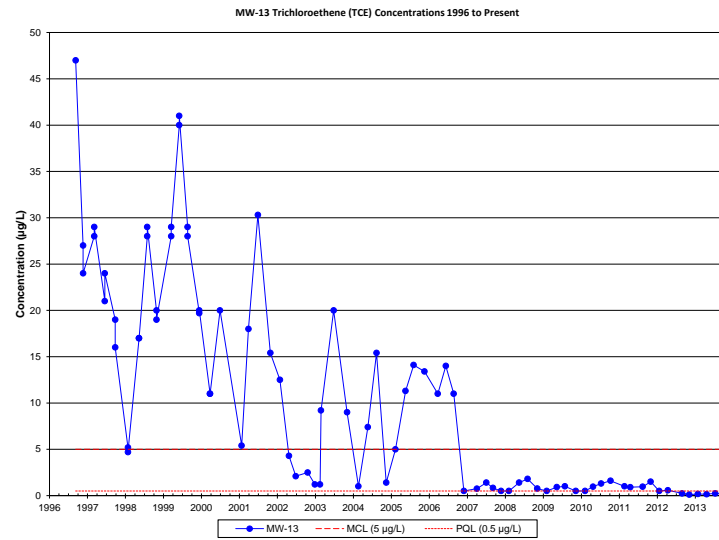
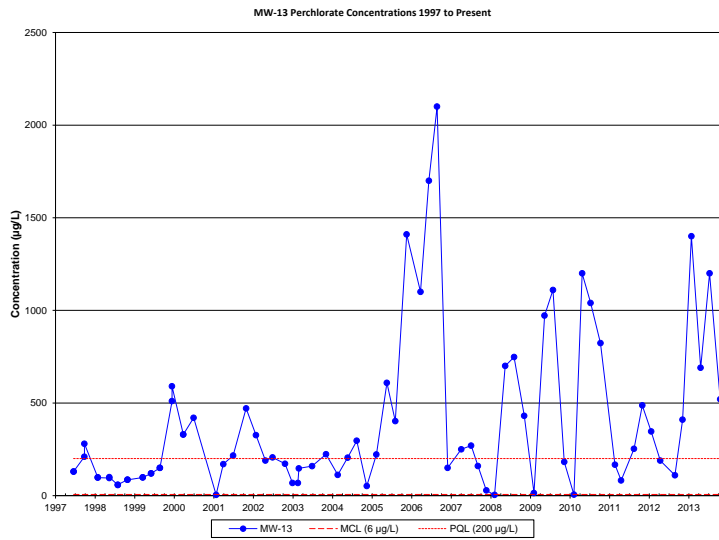
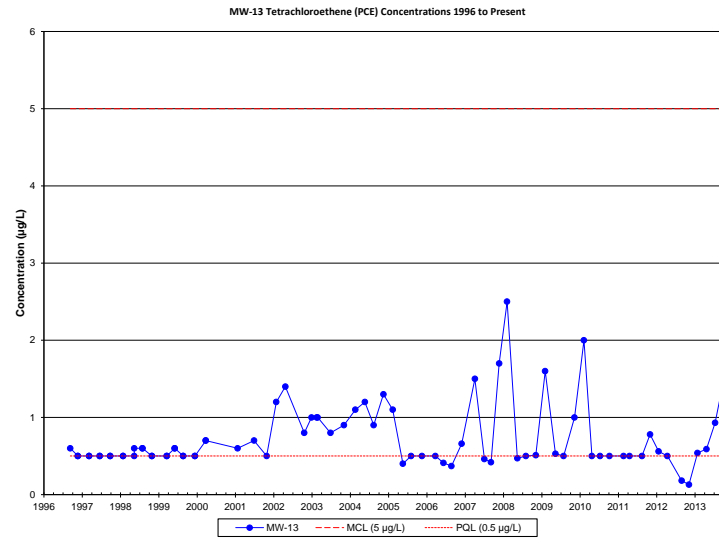
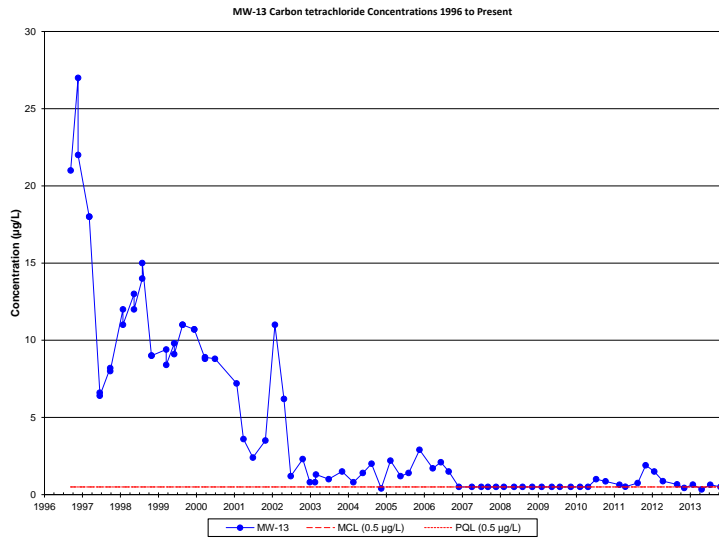


**VOCs and Perchlorate Time Series Plots for MW-10**

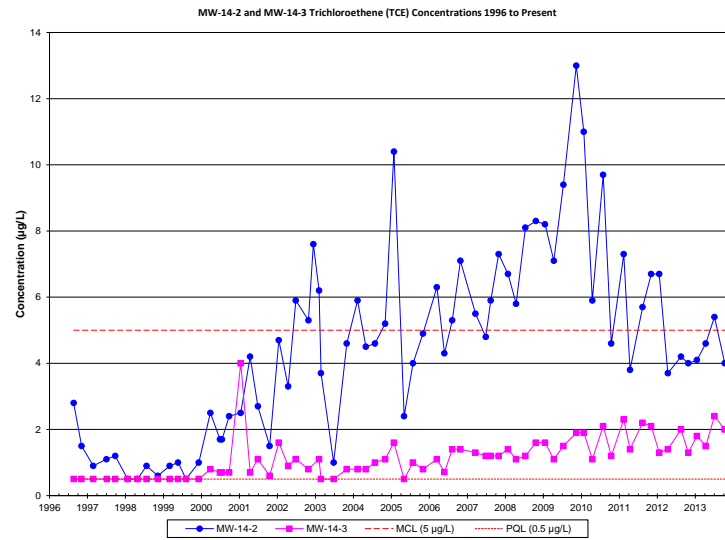
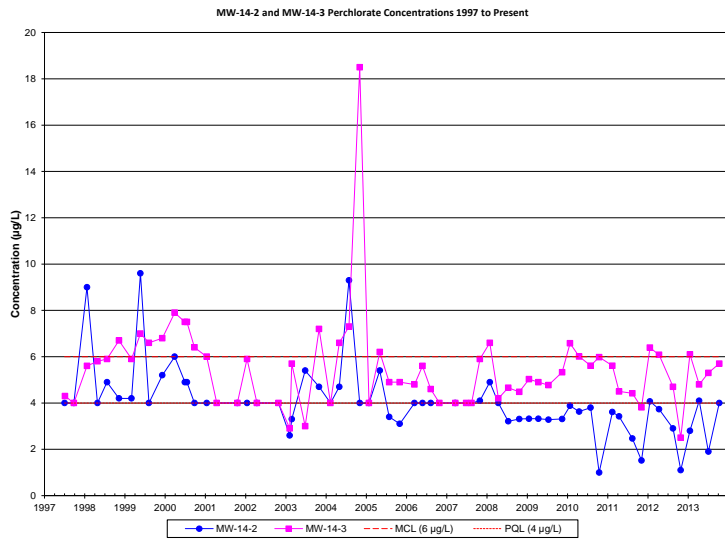
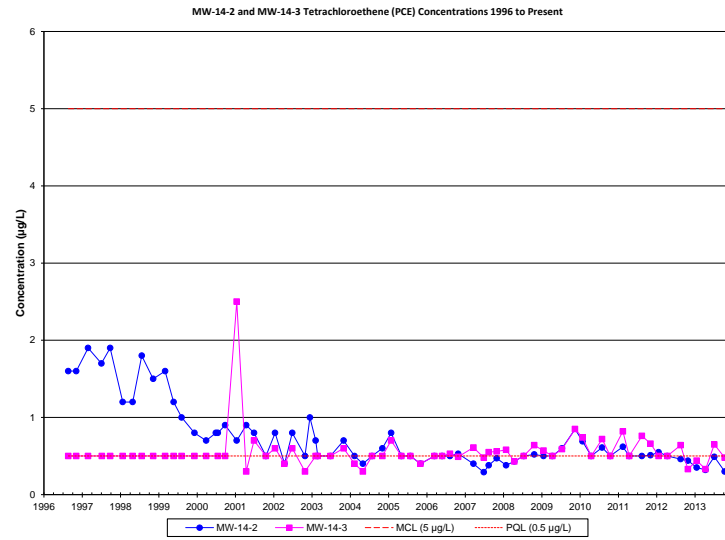
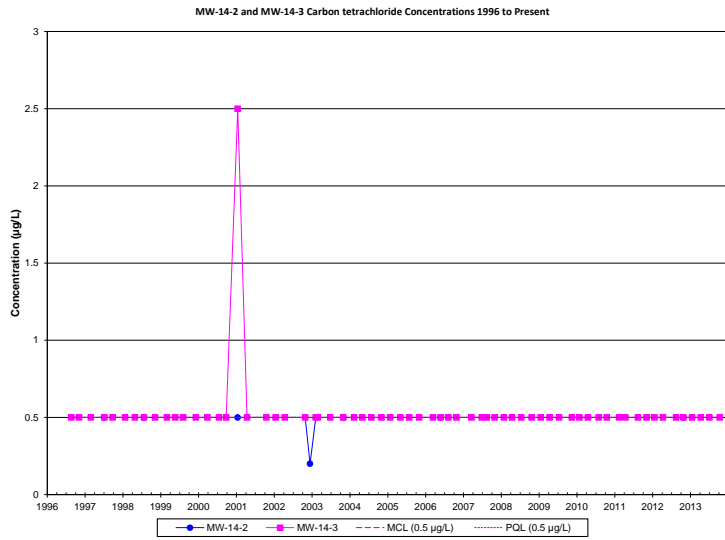


VOCs and Perchlorate Time Series Plots for MW-12-4

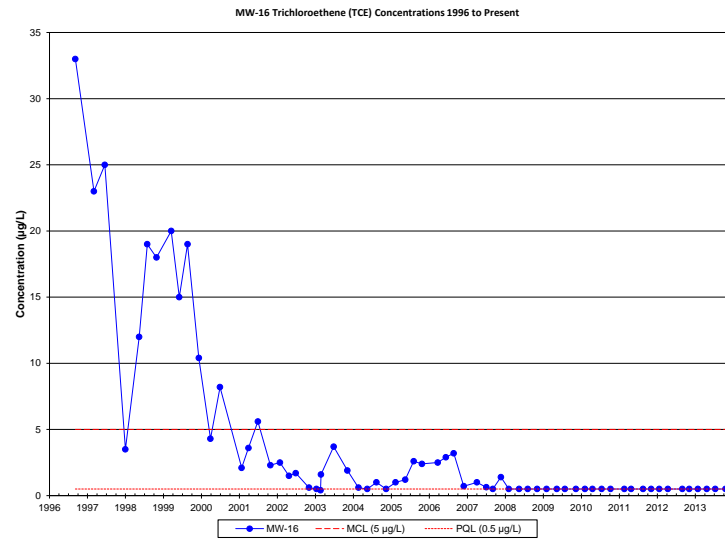
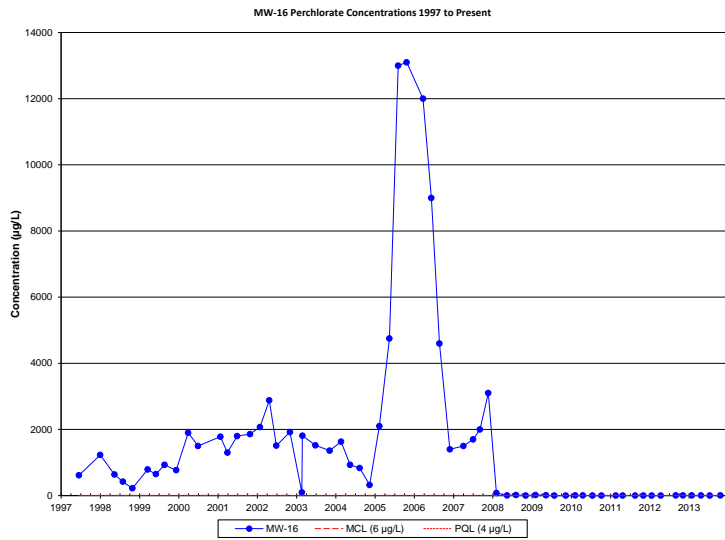
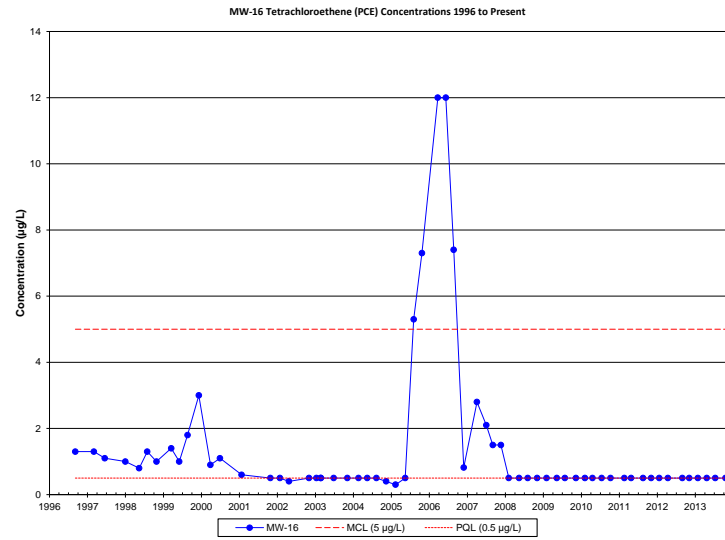
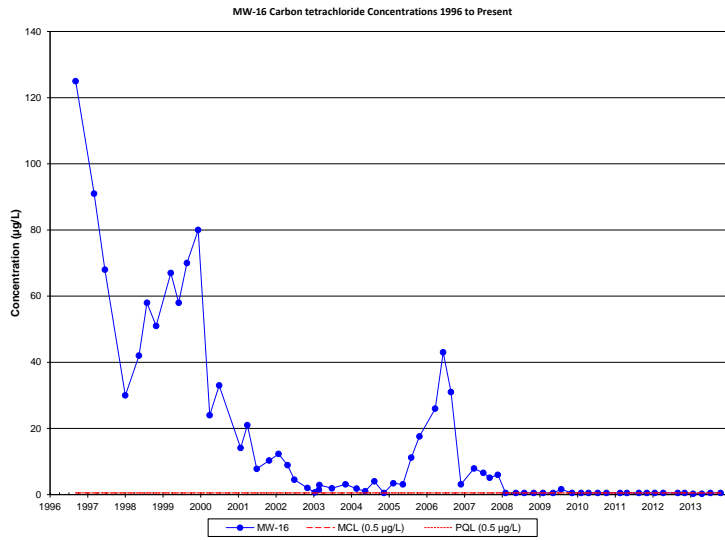




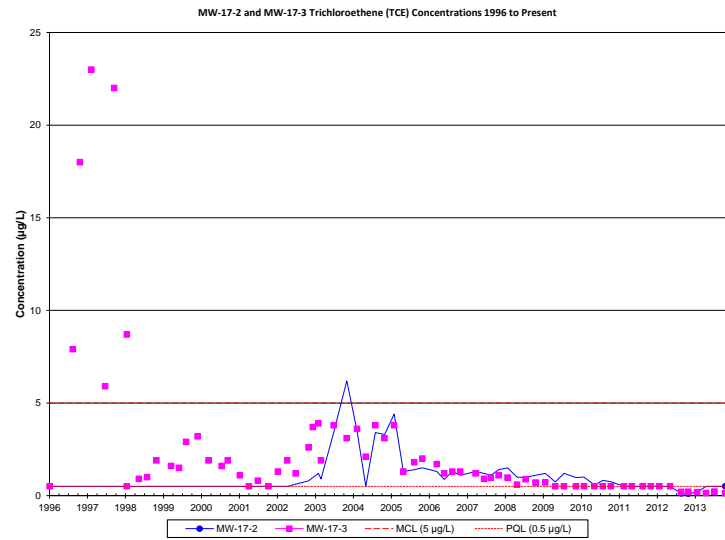
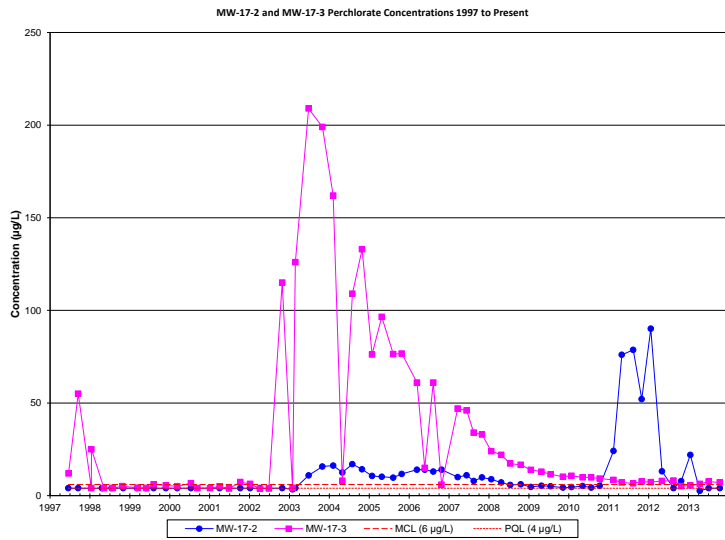
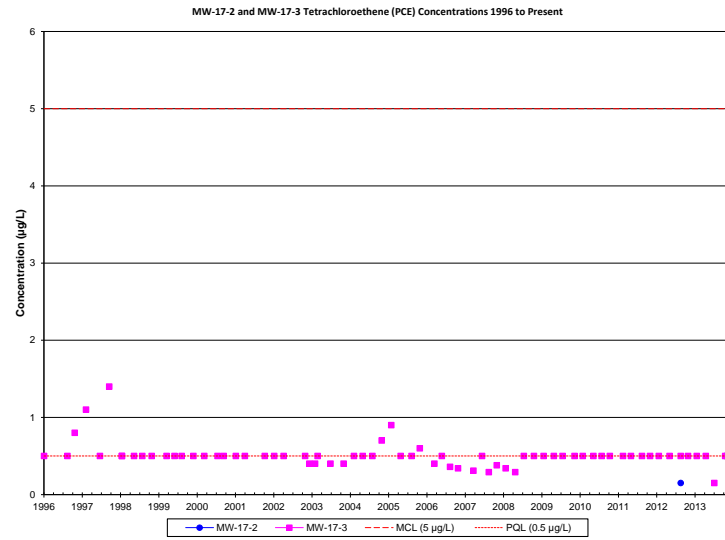
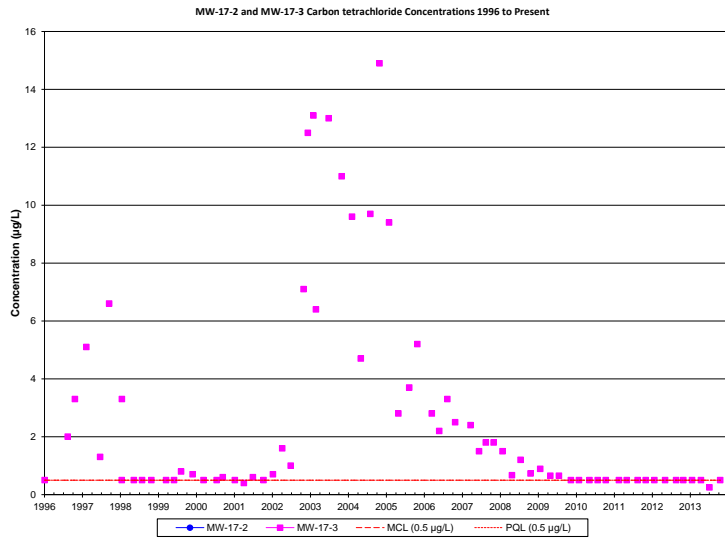
**VOCs and Perchlorate Time Series Plots for MW-13**



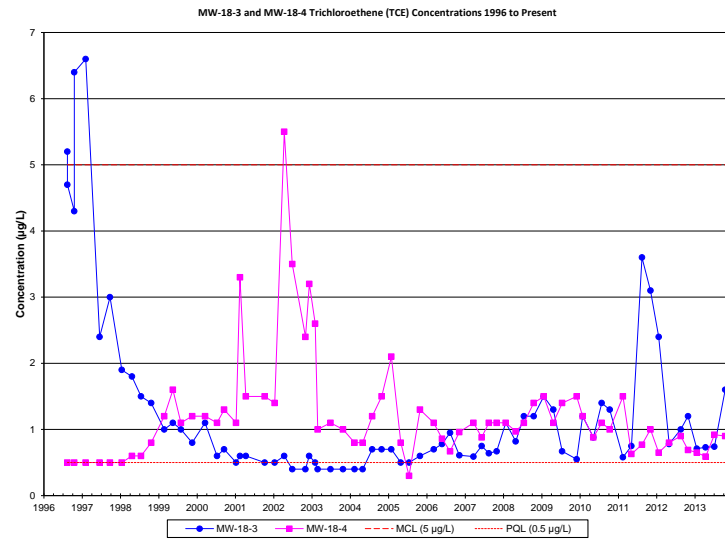
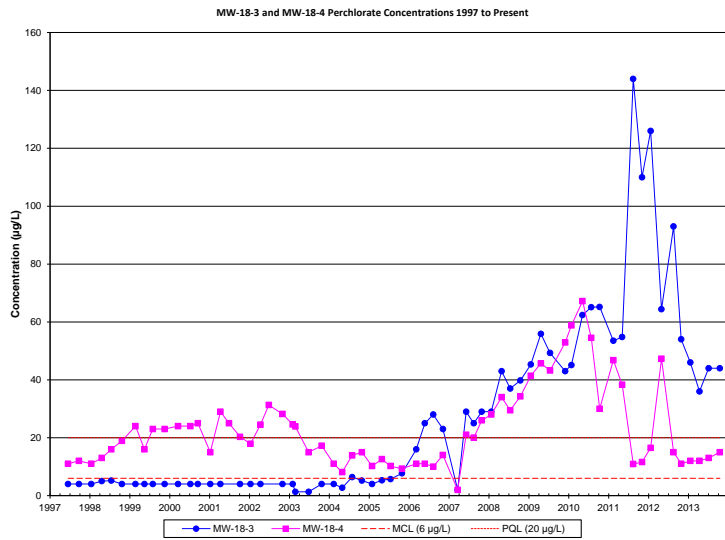
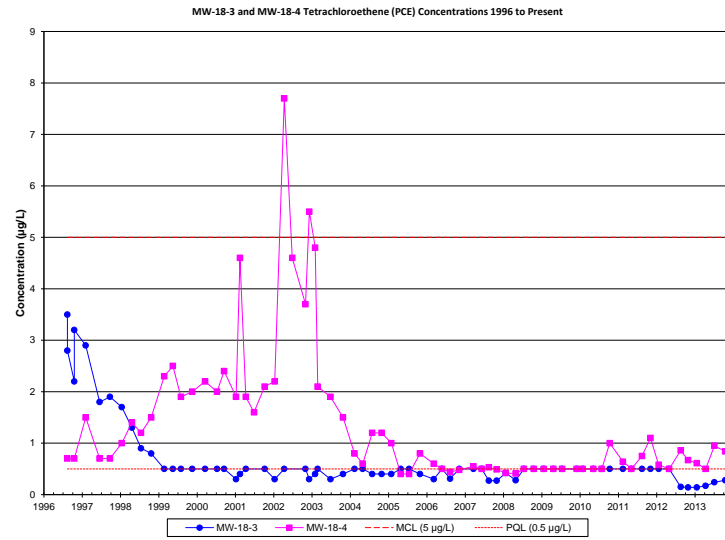
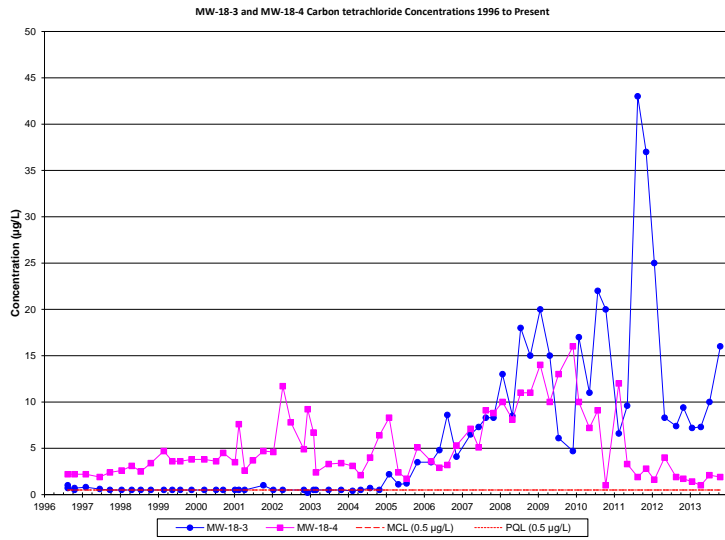
**VOCs and Perchlorate Time Series Plots for MW-14-2 and MW-14-3**



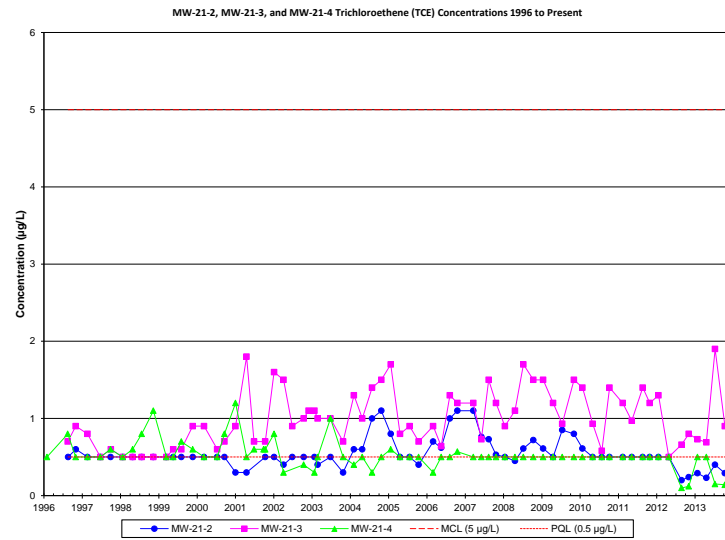
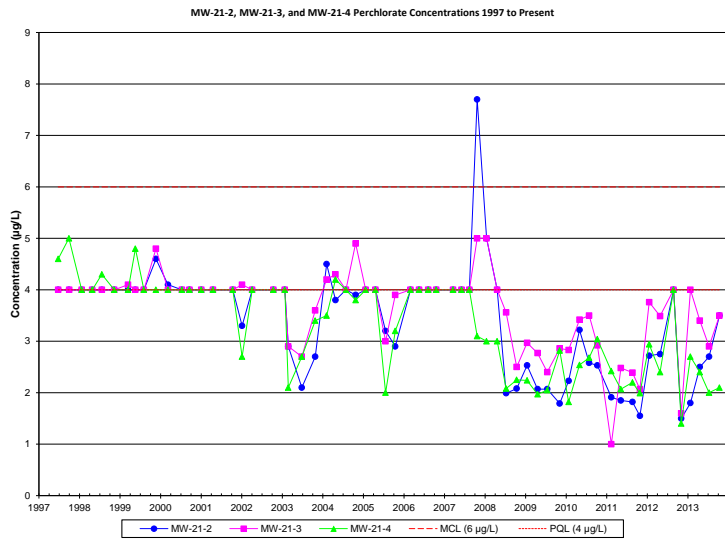
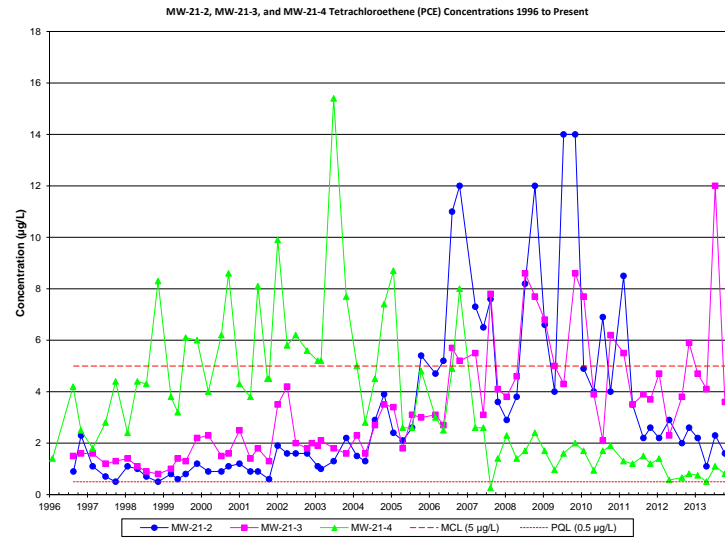
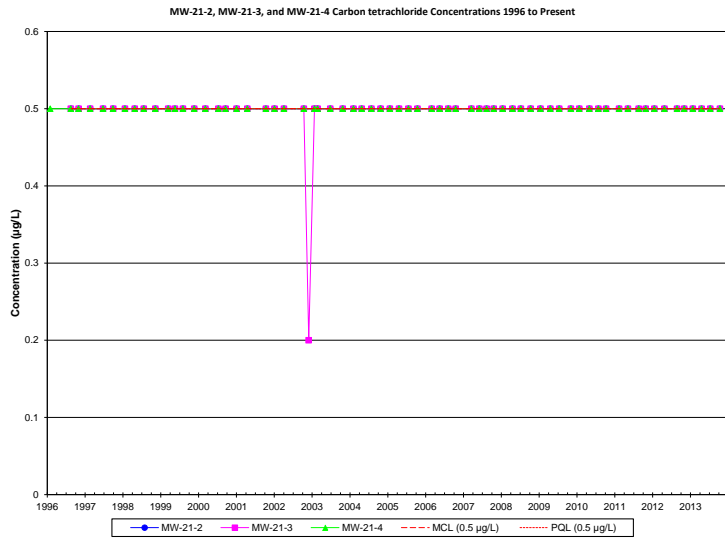
**VOCs and Perchlorate Time Series Plots for MW-16**



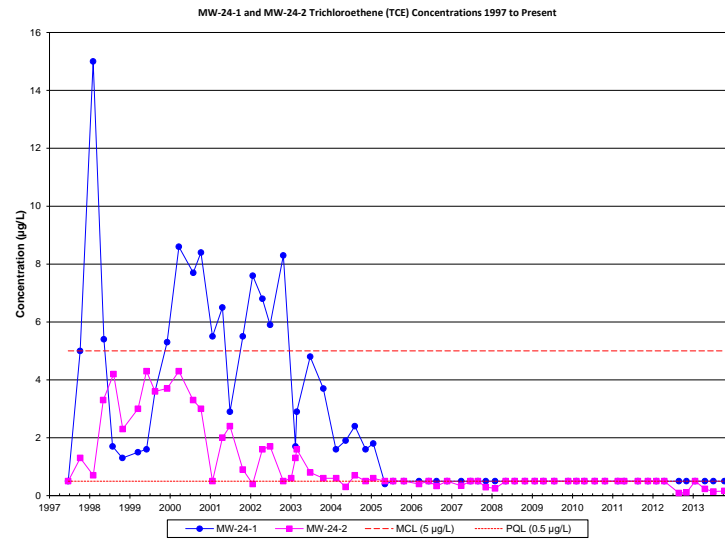
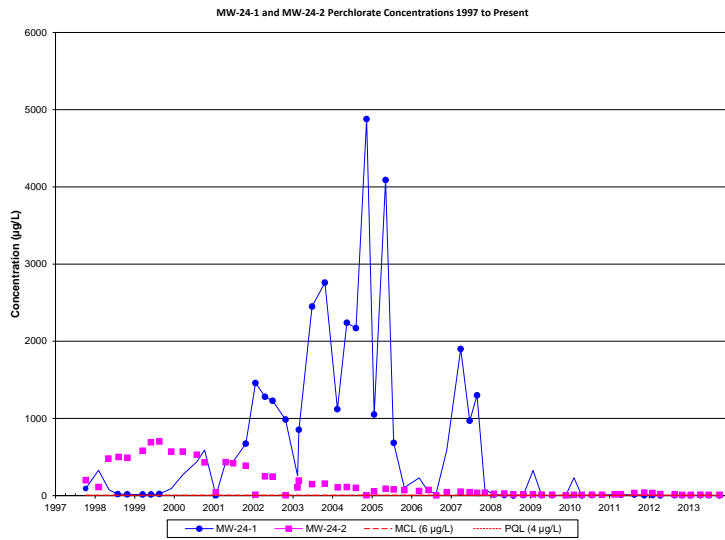
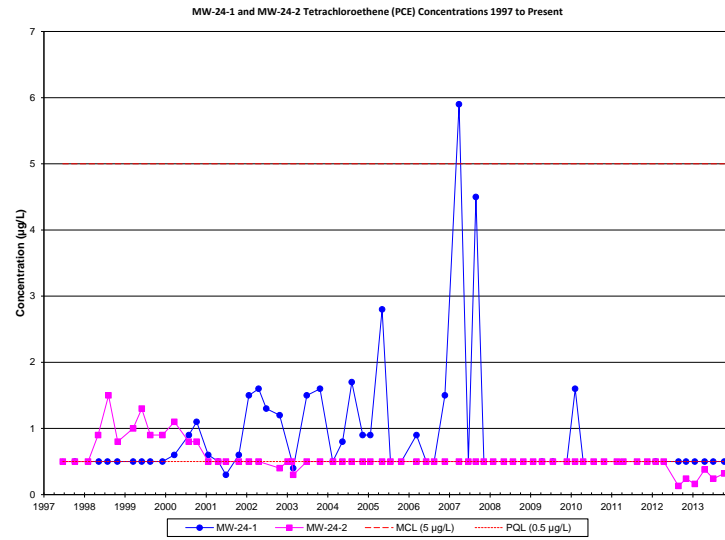
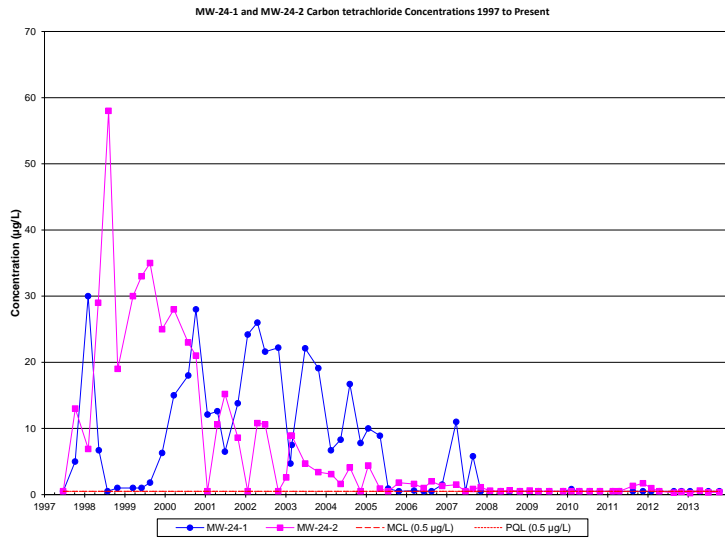
**VOCs and Perchlorate Time Series Plots for MW-17-2 and MW-17-3**



**VOCs and Perchlorate Time Series Plots for MW-18-3 and MW-18-4**



**VOCs and Perchlorate Time Series Plots for MW-21-2 and MW-21-3 and MW-21-4**



**VOCs and Perchlorate Time Series Plots for MW-24-1 and MW-24-2**