

8128.02-19

Surface Sediment Field Sampling Form  
 Rivermile 6.55 to 6.9  
 Siltronic Corporation  
 Portland, Oregon



MAUL FOSTER ALONG I

sonar depth sounder

|                              |                                   |                          |   |
|------------------------------|-----------------------------------|--------------------------|---|
| Sampling Date:               | 10/9/19                           | Sampling Location:       | SED-01                                    |
| Vessel:                      | Carolyn Dow                       | Sampling Personnel:      | CRW CS                                    |
| Weather Conditions:          | Sunny, 50s, calm                  | Subcontractor Personnel: |   |
| Depth Sounding Method: sonar | Hand Held Transducer dep          | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | NOAA PRT03 USGS 14211720          | Deckhand:                | Andrew Muth                               |
| Gage Height and Datum:       | 0.92 ft PRD Time: 835             | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North | General River Location:  | RM 6.55                                   |
| Proposed Coordinates:        |                                   |                          |   |
|                              | Latitude: 45.578255 45.578275     |                          |   |
|                              | Longitude: -122.7534 -122.753373  |                          |   |

Attempt Summary

| Attempt #: | Radius (ft) | Time | Coordinates |              | Water Depth | Recovery Depth | JC? | OLW? | Accepted? | Photo? | Additional Comments | Sample Interval cm | In 3-PT? |
|------------|-------------|------|-------------|--------------|-------------|----------------|-----|------|-----------|--------|---------------------|--------------------|----------|
|            |             |      | Latitude:   | Longitude:   |             |                |     |      |           |        |                     |                    |          |
| 1          | 1.9         | 955  | 45.578275   | 122.753380   | 10.8        | 21cm           | Y   | Y    | Y         | Y      | -                   | 24                 | Y        |
| 2          | 17.4        | 1020 | 45.57831432 | 122.75341123 | 11.2        | 18cm           | Y   | Y    | N         | N      | -                   | 18                 | N        |
| 3          | 9.8         | 1025 | 45.57830114 | 122.75338145 | 18.7        | 0              | N   | N    | N         | N      | trash in jaws       |                    | N        |
| 4          | 14.9        | 1035 | 45.57831582 | 122.75336796 | 18.9        | 10cm           | Y   | Y    | N         | N      | -                   | 10                 | N        |
| 5          | 48.5        | 1047 | 45.57840793 | 122.75336547 | 29.7        | 30             | Y   | Y    | Y         | Y      | -                   | 0-30               | Y        |
| 6          | 46.7        | 1105 | 45.57838746 | 122.75315141 | 24.8        | 28             | Y   | Y    | Y         | Y      | -                   | 0-28               | Y        |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

Homogenized 3-Point Composite Sample Description

|                 |  |
|-----------------|--|
| 3x Attempts #s: | Color, Minor/Major Constituent %, Density:                                     |
| 1, 5, 6         | gray, 90% silt, 10% fine sand, trace nutrients, very soft, no odor, no stream. |

Sample Information

| Sample ID     | Sample Time | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
|---------------|-------------|--|-----------------|
| SED-01-SS-1.0 | 1118        | Primary, MS/MSD                          | 18              |
|               |             | MS/MSD                                   | 12              |

Additional Comments

Substrate Bin #2; metal and trash observed in several grabs

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 Rivermile 6.55 to 6.9  
 Siltronic Corporation  
 Portland, Oregon



|  |   |                                      |        |
|--|---|--------------------------------------|--------|
| Sampling Date:                             | 10/9/19   | Sampling Location:                   | SED-01 |
| Sediment Description:                      |   |                                      |        |
| Attempt #:                                 | 1   | Redox Potential Discontinuity (RPD): | 5 cm   |
| Structure:                                 | homogeneous   |                                      |        |
| Density, Color, Minor/Major Constituent %: | tan to gray (subsurface), soft, silty with fine sand, trace medium sand                   |                                      |        |
| Odor/Sheen:                                | 85% fines, 15% sand, metal fragments<br>slight hydrocarbon-like odor, <del>no</del> sheen |                                      |        |
| Organics, Biota, or Other:                 | woody debris, no biota  |                                      |        |
| Sediment Description:                      |   |                                      |        |
| Attempt #:                                 | 5   | Redox Potential Discontinuity (RPD): | 0 cm   |
| Structure:                                 | homogeneous   |                                      |        |
| Density, Color, Minor/Major Constituent %: | soft, 0-0.5 cm, tan, silt, trace fine sand<br>0.5-30 cm, gray, silt, trace fine sand      |                                      |        |
| Odor/Sheen:                                | no odor or sheen  |                                      |        |
| Organics, Biota, or Other:                 | rootlets, no biota  |                                      |        |
| Sediment Description:                      |   |                                      |        |
| Attempt #:                                 | 6   | Redox Potential Discontinuity (RPD): | 1 cm   |
| Structure:                                 | homogeneous   |                                      |        |
| Density, Color, Minor/Major Constituent %: | Soft 0- <del>5</del> cm: tan, silt w/ sand<br>1-28 cm: sandy silt                         |                                      |        |
| Odor/Sheen:                                | hydrocarbon-like odor   |                                      |        |
| Organics, Biota, or Other:                 | no biota, <del>no</del> trace rootlets  |                                      |        |

Notes:

Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                              |                                   |                          |   |
|------------------------------|-----------------------------------|--------------------------|---|
| Sampling Date:               | 10/9/19                           | Sampling Location:       | SED-02                                    |
| Vessel:                      | Carolyn Dow                       | Sampling Personnel:      | CR10 CS                                   |
| Weather Conditions:          | sunny, 60s                        | Subcontractor Personnel: |   |
| Depth Sounding Method:       | sonar depth sounder               | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | NOAA PRT03 USGS 14211720          | Deckhand:                | Andrew Muth                               |
| Gage Height and Datum:       | 0.22 ft PRD Time: 1035            | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North | General River Location:  | RM 6.58                                   |
| Proposed Coordinates:        |                                   |                          |   |
|                              | Latitude: 45.57806 - 45.57808     |                          |   |
|                              | Longitude: -122.753017 -122.75299 |                          |   |

| Attempt Summary |             |      |             |               |             |                |     |      |           |        |                     |                    |          |
|-----------------|-------------|------|-------------|---------------|-------------|----------------|-----|------|-----------|--------|---------------------|--------------------|----------|
| Attempt #:      | Radius (ft) | Time | Coordinates |               | Water Depth | Recovery Depth | JC? | OLW? | Accepted? | Photo? | Additional Comments | Sample Interval cm | In 3-PT? |
|                 |             |      | Latitude:   | Longitude:    |             |                |     |      |           |        |                     |                    |          |
| 1               | 1.7         | 1150 | 45.57807861 | -122.75298382 | 3.4         | 23             | Y   | Y    | Y         | Y      | -                   | 0-23               | ✓        |
| 2               | 13.3        | 1200 | 45.57811518 | -122.75300272 | 10.3        | -              | N   | N    | N         | N      | -                   | 0-30               | -        |
| 3               | 8.6         | 1205 | 45.57808832 | -122.75295857 | 5.8         | 30             | Y   | Y    | Y         | Y      | -                   | 0-30               | ✓        |
| 4               | 14.3        | 1215 | 45.57806507 | -122.75293841 | 11.6        | 27             | Y   | Y    | Y         | Y      | -                   | 0-27               | ✓        |
|                 |             |      |             |               |             |                |     |      |           |        |                     |                    |          |
|                 |             |      |             |               |             |                |     |      |           |        |                     |                    |          |
|                 |             |      |             |               |             |                |     |      |           |        |                     |                    |          |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

| Homogenized 3-Point Composite Sample Description |  |
|--|--|
| 3x Attempts #s:                                  | Color, Minor/Major Constituent %, Density:   |
| 1, 3, 4  | Gray, sandy silt (85% fines, 15% sand, f-m) trace organic debris (rootlets). Slight odor. No sheen |

| Sample Information |             |  |                 |
|--------------------|-------------|--|-----------------|
| Sample ID          | Sample Time | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
| SED-02-SS-1.0      | 1245        | Primary                                  | 6               |

| Additional Comments |
|---------------------|
|                     |

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|  |             |                                      |                                  |
|--|-------------|--------------------------------------|----------------------------------|
| Sampling Date:                             | 10/9/19     | Sampling Location:                   | SED-02                           |
| Sediment Description:                      |             |                                      |                                  |
| Attempt #:                                 | 1           | Redox Potential Discontinuity (RPD): | 1 <del>23</del> cm<br><i>low</i> |
| Structure:                                 | homogeneous |                                      |                                  |
| Density, Color, Minor/Major Constituent %: |             |                                      |                                  |
| 23 cm, sandy silt, gray                    |             | 0-1 cm = tan                         |                                  |
| very soft                                  |             | 1-23 cm = gray                       |                                  |
| Odor/Sheen: no odor, no sheen              |             |                                      |                                  |
| Organics, Biota, or Other: trace rootlets  |             |                                      |                                  |

|  |                  |                                      |      |
|--|------------------|--------------------------------------|------|
| Sediment Description:                                |                  |                                      |      |
| Attempt #:   | 3 <sup>w</sup> 3 | Redox Potential Discontinuity (RPD): | 1 cm |
| Structure:   | homogeneous      |                                      |      |
| Density, Color, Minor/Major Constituent %:           |                  |                                      |      |
| soft   |                  | 1-30                                 |      |
| 0-1 cm: tan, sandy silt, interacting fines w/depth   |                  |                                      |      |
| trace cobbles, subrounded                            |                  |                                      |      |
| Odor/Sheen: slight odor (hydrocarbon-like), no sheen |                  |                                      |      |
| Organics, Biota, or Other: trace rootlets            |                  |                                      |      |

|   |                         |                                      |      |
|---|-------------------------|--------------------------------------|------|
| Sediment Description:                               |                         |                                      |      |
| Attempt #:  | 4                       | Redox Potential Discontinuity (RPD): | 1 cm |
| Structure:  | homogeneous             |                                      |      |
| Density, Color, Minor/Major Constituent %:          |                         |                                      |      |
| 27  | 0-1: tan, 1-27 cm, gray |                                      |      |
| sandy silt, 70% silt, 30% sand                      |                         |                                      |      |
| Odor/Sheen: no sheen or odor                        |                         |                                      |      |
| Organics, Biota, or Other: trace rootlets and biota |                         |                                      |      |

Notes:

Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.

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**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                              |   |                          |   |
|------------------------------|---|--------------------------|---|
| Sampling Date:               | 10/9/19                                     | Sampling Location:       | SED-03                                    |
| Vessel:                      | Carolyn Dow                                 | Sampling Personnel:      | CRW CS                                    |
| Weather Conditions:          | Sunny, 50s                                  | Subcontractor Personnel: |   |
| Depth Sounding Method:       | sonar depth sounder                         | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | NOAA PRT03 USGS 14211720                    | Deckhand:                | Andrew Muth                               |
| Gage Height and Datum:       | 0.9 ft PRD Time: 1335                       | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North           | General River Location:  | RM 6.65W                                  |
| Proposed Coordinates:        |   |                          |   |
|                              | Latitude: <del>00-45.577562</del> 45.577582 |                          |   |
|                              | Longitude: <del>422.75193</del> 122.751903  |                          |   |

**Attempt Summary**

| Attempt #:   | Radius (ft)   | Time            | Coordinates |              | Water Depth    | Recovery Depth | JC?          | OLW? | Accepted? | Photo? | Additional Comments | Sample Interval | In 3-PT? |
|--------------|---------------|-----------------|-------------|--------------|----------------|----------------|--------------|------|-----------|--------|---------------------|-----------------|----------|
|              |               |                 | Latitude:   | Longitude:   |                |                |              |      |           |        |                     |                 |          |
| 1            | 6.93          | 1500            | 45.57757517 | 122.75187310 | 13.5           | 23             | Y            | Y    | Y         | Y      | large root in jaws  | 0-23            | ✓        |
| <del>2</del> | <del>ew</del> | <del>1500</del> |             |              | <del>5.4</del> |                | <del>N</del> |      |           |        |                     |                 |          |
| 2            | 6.05          | 1515            | 45.57760915 | 122.75186281 | 6.3            | 25             | Y            | Y    | Y         | Y      | -                   | 0-25            | ✓        |
| 3            | 6.05          | 1525            | 45.57759336 | 122.75194063 | 6.4            | 23             | Y            | Y    | Y         | Y      | -                   | 0-23            | ✓        |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

**Homogenized 3-Point Composite Sample Description**

|                 |  |
|-----------------|--|
| 3x Attempts #s: | Color, Minor/Major Constituent %, Density:                               |
| 1, 2, 3         | Gray brown, silty sand, soft to loose, <sup>30-40</sup> no odor or sheen |

**Sample Information**

| Sample ID     | Sample Time          | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
|---------------|----------------------|--|-----------------|
| SED-03-SS-1.0 | <del>1500</del> 1545 | Primary                                  | 6               |

**Additional Comments**

|  |
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|  |
|--|

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**Portland, Oregon**



|  |  |        |
|--|--|--------|
| Sampling Date: 10/9/19                                 | Sampling Location:                     | SED-03 |
| <b>Sediment Description:</b>                           |  |        |
| Attempt #: 1   | Redox Potential Discontinuity (RPD): 0 | cm     |
| Structure: homogeneous                                 |  |        |
| Density, Color, Minor/Major Constituent %:             |  |        |
| brown only at surface, sandy silt at surface (0-1 in.) |  |        |
| then grades to <sup>gray</sup> silty sand at depth     |  |        |
| soft to loose  |  |        |
| Odor/Sheen: no odor or sheen                           |  |        |
| Organics, Biota, or Other: trace roots                 |  |        |

|   |  |    |
|---|--|----|
| <b>Sediment Description:</b>                          |  |    |
| Attempt #: 2  | Redox Potential Discontinuity (RPD): 0 | cm |
| Structure: homogeneous                                |  |    |
| Density, Color, Minor/Major Constituent %:            |  |    |
| 0-23; 100% gray, f-c sand, loose, trace cobbles       |  |    |
| and gravel  |  |    |
| Odor/Sheen: no odor or sheen                          |  |    |
| Organics, Biota, or Other: small clam, trace rootlets |  |    |

|   |  |    |
|---|--|----|
| <b>Sediment Description:</b>                    |  |    |
| Attempt #: 3                                    | Redox Potential Discontinuity (RPD): 2 | cm |
| Structure: homogeneous                          |  |    |
| Density, Color, Minor/Major Constituent %:      |  |    |
| medium dense, brown, 100% fine sand             |  |    |
| trace cobbles and gravel subangular             |  |    |
| Odor/Sheen: no odor or sheen                    |  |    |
| Organics, Biota, or Other: no biota or organics |  |    |

Notes:

Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.

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**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                              |                                     |                          |   |
|------------------------------|-------------------------------------|--------------------------|---|
| Sampling Date:               | 10/9/19                             | Sampling Location:       | SED-04                                    |
| Vessel:                      | Carolyn Dow                         | Sampling Personnel:      | CKW CS                                    |
| Weather Conditions:          | Sunny, 50s                          | Subcontractor Personnel: |   |
| Depth Sounding Method:       | Sonar depth sounder                 | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | <del>NOAA PRT03</del> USGS 14211720 | Deckhand:                | Andrew Muth                               |
| Gage Height and Datum:       | 2.3 ft PRD Time: 1435               | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North   | General River Location:  | RM 6.72W                                  |
| Proposed Coordinates:        |                                     |                          |   |
|                              | Latitude: 45.577223 45.577243       |                          |   |
|                              | Longitude: -122.750855 -122.750828  |                          |   |

**Attempt Summary**

| Attempt #: | Radius (ft) | Time | Coordinates |              | Water Depth | Recovery Depth | JC? | OLW? | Accepted? | Photo? | Additional Comments | Sample Interval | In 3-PT? |
|------------|-------------|------|-------------|--------------|-------------|----------------|-----|------|-----------|--------|---------------------|-----------------|----------|
|            |             |      | Latitude:   | Longitude:   |             |                |     |      |           |        |                     |                 |          |
| 1          | 8.58        | 1530 | 45.57724010 | 122.75082439 | 15.0        | 27             | Y   | Y    | Y         | Y      | -                   | 0-27            | Y        |
| 2          | 6.97        | 1604 | 45.57725183 | 122.75084710 | 16.3        | 25             | Y   | Y    | Y         | Y      | -                   | 0-25            | Y        |
| 3          | 0.99        | 1616 | 45.57726471 | 122.75081425 | 18.7        | 21             | Y   | Y    | Y         | Y      | -                   | 0-21            | Y        |
|            |             |      |             |              |             |                |     |      |           |        |                     |                 |          |
|            |             |      |             |              |             |                |     |      |           |        |                     |                 |          |
|            |             |      |             |              |             |                |     |      |           |        |                     |                 |          |
|            |             |      |             |              |             |                |     |      |           |        |                     |                 |          |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

**Homogenized 3-Point Composite Sample Description**

|                 |   |
|-----------------|---|
| 3x Attempts #s: | Color, Minor/Major Constituent %, Density:                        |
| 1, 2, 3         | Gray, sandy silt, soft, trace rootlets, sheen and odor<br>↳ 10/27 |

**Sample Information**

| Sample ID         | Sample Time | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
|-------------------|-------------|--|-----------------|
| SED-04-SS-1.0     | 1630        | Primary                                  | 1               |
| SED-04-SS-1.0-DUP | 1430        | Duplicate                                | 1               |

**Additional Comments**

|  |
|--|
|  |
|--|

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
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**Portland, Oregon**



|                       |         |                           |        |
|-----------------------|---------|---------------------------|--------|
| <b>Sampling Date:</b> | 10/9/19 | <b>Sampling Location:</b> | SED-04 |
|-----------------------|---------|---------------------------|--------|

| Sediment Description:                             |   |
|---|---|
| Attempt #: 1                                      | Redox Potential Discontinuity (RPD): 1 cm |
| Structure: homogeneous                            |   |
| Density, Color, Minor/Major Constituent %:        |   |
| 0-5cm - sandy silt, tan                           |   |
| 5-27 - silt w/ sand, gray                         |   |
| soft  |   |
| Odor/Sheen: sheen, hydrocarbon-like odor          |   |
| Organics, Biota, or Other: dead clam and rootlets |   |

| Sediment Description:                      |   |
|--|---|
| Attempt #: 2                               | Redox Potential Discontinuity (RPD): 1 cm |
| Structure: homogeneous                     |   |
| Density, Color, Minor/Major Constituent %: |   |
| 0-7cm: sandy silt gray                     |   |
| 7-25cm silt w/ sand gray,                  |   |
| medium dense                               |   |
| Odor/Sheen: hydrocarbon-like odor, sheen   |   |
| Organics, Biota, or Other: trace rootlets  |   |

| Sediment Description:                             |   |
|---|---|
| Attempt #: 3                                      | Redox Potential Discontinuity (RPD): 1 cm |
| Structure: homogeneous                            |   |
| Density, Color, Minor/Major Constituent %:        |   |
| <del>Stratified</del> silt w/ sand, trace cobbles |   |
|   |   |
| Odor/Sheen: hydrocarbon-like odor, sheen          |   |
| Organics, Biota, or Other: trace organics         |   |

Notes:  
 Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.



**Surface Sediment Field Sampling Form**  
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**Portland, Oregon**



|                              |   |                          |   |
|------------------------------|---|--------------------------|---|
| Sampling Date:               | 10/10/19  | Sampling Location:       | SED-05                                    |
| Vessel:                      | Carolyn Dow   | Sampling Personnel:      | CRW CS                                    |
| Weather Conditions:          | sunny, calm, 40s  | Subcontractor Personnel: |   |
| Depth Sounding Method:       | sonar depth sounder   | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | NOAA PRT03 USGS 14211720  | Deckhand:                | Andrew Muth                               |
| Gage Height and Datum:       | 2.38 ft PRD Time: 635   | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North                                   | General River Location:  | RM 6.73W                                  |
| Proposed Coordinates:        | Latitude: 45.576977 45.576991<br>Longitude: -122.750634 -122.750607 |                          |   |

**Attempt Summary**

| Attempt #: | Radius (ft) | Time | Coordinates |            | Water Depth | Recovery Depth | JC? | OLW? | Accepted? | Photo? | Additional Comments  | Sample Interval | In 3-PT? |
|------------|-------------|------|-------------|------------|-------------|----------------|-----|------|-----------|--------|----------------------|-----------------|----------|
|            |             |      | Latitude:   | Longitude: |             |                |     |      |           |        |                      |                 |          |
| 1          | 9.4         | 830  | 45.576977   | 122.750593 | 4.7         | 0-20.5         | Y   | Y    | Y         | Y      | rock stuck at bottom | 0-20.5          | ✓        |
| 2          | 0.5         | 838  | 45.576991   | 122.750609 | 6.4         | 0-25           | Y   | Y    | Y         | Y      | —                    | 0-25            | ✓        |
| 3          | 11.8        | 850  | 45.576987   | 122.750561 | 8.7         | 25             | Y   | Y    | Y         | Y      | —                    | 0-25            | ✓        |
|            |             |      |             |            |             |                |     |      |           |        |                      |                 |          |
|            |             |      |             |            |             |                |     |      |           |        |                      |                 |          |
|            |             |      |             |            |             |                |     |      |           |        |                      |                 |          |
|            |             |      |             |            |             |                |     |      |           |        |                      |                 |          |
|            |             |      |             |            |             |                |     |      |           |        |                      |                 |          |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

**Homogenized 3-Point Composite Sample Description**

|                 |   |
|-----------------|---|
| 3x Attempts #s: | Color, Minor/Major Constituent %, Density:  |
| 1, 2, 3         | Gray, 100% sand w/ trace gravels & cobbles, loose to medium dense, slight odor, no silt |

**Sample Information**

| Sample ID     | Sample Time | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
|---------------|-------------|--|-----------------|
| SED-05-SS-1.0 | 900         | Primary                                  | 6               |
|               |             |  |                 |

**Additional Comments**

|  |
|--|
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**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|  |  |                                      |        |
|--|--|--------------------------------------|--------|
| <b>Sampling Date:</b>                      | 10/10/19   | <b>Sampling Location:</b>            | SED-05 |
| <b>Sediment Description:</b>               |  |                                      |        |
| Attempt #:                                 | 1  | Redox Potential Discontinuity (RPD): | 2/ cm  |
| Structure:                                 | homogeneous  |                                      |        |
| Density, Color, Minor/Major Constituent %: | 100% sand fine to medium gr, gray<br>trace gravel, fine<br>loose |                                      |        |
| Odor/Sheen:                                | no odor or sheen   |                                      |        |
| Organics, Biota, or Other:                 | shells   |                                      |        |

|  |   |                                      |      |
|--|---|--------------------------------------|------|
| <b>Sediment Description:</b>               |   |                                      |      |
| Attempt #:                                 | 2   | Redox Potential Discontinuity (RPD): | 2 cm |
| Structure:                                 | homogeneous   |                                      |      |
| Density, Color, Minor/Major Constituent %: | gray, 100% sand, f- <sup>5</sup> / <sub>15</sub> gr., loose, trace gravels, fine<br>trace cobbles |                                      |      |
| Odor/Sheen:                                | slight hydrocarbon-like odor, no sheen  |                                      |      |
| Organics, Biota, or Other:                 | wood fragments  |                                      |      |

|  |  |                                      |      |
|--|--|--------------------------------------|------|
| <b>Sediment Description:</b>               |  |                                      |      |
| Attempt #:                                 | 3  | Redox Potential Discontinuity (RPD): | 2 cm |
| Structure:                                 | homogeneous  |                                      |      |
| Density, Color, Minor/Major Constituent %: | 0- <del>2</del> 1: Redox tan color<br>2-10: gray<br>100% sand, f-c, trace of gravel and cobbles, med dense |                                      |      |
| Odor/Sheen:                                | no odor or sheen   |                                      |      |
| Organics, Biota, or Other:                 | organics present (rootlets), shells  |                                      |      |

Notes:

Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                              |   |                          |   |
|------------------------------|---|--------------------------|---|
| Sampling Date:               | 10/10/19                                      | Sampling Location:       | SED-06                                    |
| Vessel:                      | Carolyn Dow                                   | Sampling Personnel:      | CRW CS                                    |
| Weather Conditions:          | sunny, 50, calm                               | Subcontractor Personnel: |   |
| Depth Sounding Method:       | sonar depth sounder                           | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | NOAA PRT03 USGS 14211720                      | Deckhand:                | Andrew Muth                               |
| Gage Height and Datum:       | 2.06 ft PRD Time: 735                         | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North             | General River Location:  | RM 6.7                                    |
| Proposed Coordinates:        |   |                          |   |
|                              | Latitude: <del>45.576771</del> 45.576791      |                          |   |
|                              | Longitude: <del>-122.750215</del> -122.750188 |                          |   |

| Attempt Summary |             |      |             |              |             |                |     |      |           |        |                     |                 |          |
|-----------------|-------------|------|-------------|--------------|-------------|----------------|-----|------|-----------|--------|---------------------|-----------------|----------|
| Attempt #:      | Radius (ft) | Time | Coordinates |              | Water Depth | Recovery Depth | JC? | OLW? | Accepted? | Photo? | Additional Comments | Sample Interval | In 3-PT? |
|                 |             |      | Latitude:   | Longitude:   |             |                |     |      |           |        |                     |                 |          |
| 1               | 1.2         | 910  | 45.57678891 | 122.7501149  | 8.1         | 24.5           | Y   | Y    | Y         | Y      | -                   | 0-24.5          | ✓        |
| 2               | 5.8         | 930  | 45.57680335 | 122.75020245 | 15.2        | 25             | Y   | Y    | Y         | Y      | -                   | 0-25            | ✓        |
| 3               | 7.3         | 940  | 45.57679728 | 122.75016082 | 9.8         | 22             | Y   | Y    | Y         | Y      | -                   | 0-22            | ✓<br>ced |
|                 |             |      |             |              |             |                |     |      |           |        |                     |                 |          |
|                 |             |      |             |              |             |                |     |      |           |        |                     |                 |          |
|                 |             |      |             |              |             |                |     |      |           |        |                     |                 |          |
|                 |             |      |             |              |             |                |     |      |           |        |                     |                 |          |
|                 |             |      |             |              |             |                |     |      |           |        |                     |                 |          |
|                 |             |      |             |              |             |                |     |      |           |        |                     |                 |          |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

| Homogenized 3-Point Composite Sample Description |   |
|--|---|
| 3x Attempts #s:                                  | Color, Minor/Major Constituent %, Density:                                  |
| 1, 2, 3.   | gray, 90% f-m sand, 10% fines, loose, trace gravel<br>slight odor, no sheen |

| Sample Information |             |  |                 |
|--------------------|-------------|--|-----------------|
| Sample ID          | Sample Time | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
| SED-06-SS-1.0      | 1000        | Primary, MS/MSD                          | 18              |
|                    |             |  |                 |

| Additional Comments |
|---------------------|
|                     |

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                       |          |                           |        |
|-----------------------|----------|---------------------------|--------|
| <b>Sampling Date:</b> | 10/10/19 | <b>Sampling Location:</b> | SED-06 |
|-----------------------|----------|---------------------------|--------|

|  |   |
|--|---|
| <b>Sediment Description:</b>                 |   |
| Attempt #: 1                                 | Redox Potential Discontinuity (RPD): 4 cm |
| Structure: homogeneous                       |   |
| Density, Color, Minor/Major Constituent %:   |   |
| 100% sand, f-c; trace of gravel, gray, loose |   |
| Odor/Sheen: no odor, no sheen                |   |
| Organics, Biota, or Other: trace rootlets    |   |

|  |   |
|--|---|
| <b>Sediment Description:</b>               |   |
| Attempt #: 2                               | Redox Potential Discontinuity (RPD): 1 cm |
| Structure: homogeneous                     |   |
| Density, Color, Minor/Major Constituent %: |   |
| tan to gray after 1 cm, loose              |   |
| 85/15 sand w/ silt, trace of gravel        |   |
| s-f-m                                      |   |
| Odor/Sheen: no odor, <del>or</del> Sheen   |   |
| Organics, Biota, or Other: rootlets        |   |

|  |   |
|--|---|
| <b>Sediment Description:</b>                       |   |
| Attempt #: 3                                       | Redox Potential Discontinuity (RPD): 1-5 cm |
| Structure: homogeneous                             |   |
| Density, Color, Minor/Major Constituent %:         |   |
| 85% fine to med sand,                              |   |
| 15% silt   |   |
| medium dense                                       |   |
| Odor/Sheen: slight hydrocarbon-like odor, no sheen |   |
| Organics, Biota, or Other: rootlets, shells        |   |

Notes:

Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                              |   |                          |   |
|------------------------------|---|--------------------------|---|
| Sampling Date:               | 10/10/19                                      | Sampling Location:       | SED-07                                    |
| Vessel:                      | Carolyn Dow                                   | Sampling Personnel:      | CRW CS                                    |
| Weather Conditions:          | Sunny, calm, 40s                              | Subcontractor Personnel: |   |
| Depth Sounding Method:       | Sonot depth sounder                           | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | NOAA PRT03 USGS 14211720                      | Deckhand:                | Andrew Muth                               |
| Gage Height and Datum:       | 7.66 ft PRD Time: 8:35                        | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North             | General River Location:  | RM 6.82 W                                 |
| Proposed Coordinates:        |   |                          |   |
|                              | Latitude: <del>45.576374</del> 45.576394      |                          |   |
|                              | Longitude: <del>-122.749314</del> -122.749287 |                          |   |

**Attempt Summary**

| Attempt #: | Radius (ft) | Time | Coordinates |              | Water Depth | Recovery Depth | JC? | OLW? | Accepted? | Photo? | Additional Comments | Sample Interval | In 3-PT? |
|------------|-------------|------|-------------|--------------|-------------|----------------|-----|------|-----------|--------|---------------------|-----------------|----------|
|            |             |      | Latitude:   | Longitude:   |             |                |     |      |           |        |                     |                 |          |
| 1          | 6.0         | 1005 | 45.57640959 | 122.74927960 | 5.5         | 10             | Y   | Y    | N         | N      | metal frags         | -               | -        |
| 2          | 2.1         | 1008 | 45.57638841 | 122.74928108 | 13.4        | 23             | Y   | Y    | Y         | Y      | -                   | 0-23            | ✓        |
| 3          | 6.4         | 1025 | 45.57638755 | 122.74926391 | 15.6        | 20.5           | Y   | Y    | Y         | Y      | -                   | 0-20.5          | ✓        |
| 4          | 9.7         | 1035 | 45.57636769 | 122.74926210 | 14.0        | 18             | Y   | N    | N         | Y      | -                   | -               | -        |
| 5          | 10.9        | 1100 | 45.57640552 | 122.74924770 | 14.3        | 23             | N   | Y    | Y         | Y      | wood catch in jaws  | 0-23            | ✓        |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

**Homogenized 3-Point Composite Sample Description**

|                 |  |
|-----------------|--|
| 3x Attempts #s: | Color, Minor/Major Constituent %, Density:   |
| 2, 3, 5         | Gray, sandy silt (30/70), fine sand, soft to firm, rootlets hydrocarbon-like odor, slight sheen. |

**Sample Information**

| Sample ID         | Sample Time | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
|-------------------|-------------|--|-----------------|
| SED-07-SS-1.0     | 1100        | Primary ~ -                              | 6               |
| SED-07-SS-1.0-DUP | 1100        | Duplicate                                | 6               |

**Additional Comments**

|  |
|--|
|  |
|--|

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                |          |                    |        |
|----------------|----------|--------------------|--------|
| Sampling Date: | 10/10/19 | Sampling Location: | SED-07 |
|----------------|----------|--------------------|--------|

| Sediment Description:                      |  |                                      |              |
|--|--|--------------------------------------|--------------|
| Attempt #:                                 | 2  | Redox Potential Discontinuity (RPD): | 0 cm surface |
| Structure:                                 | homogeneous  |                                      |              |
| Density, Color, Minor/Major Constituent %: | dense <sup>wp</sup> , surface has fine sand<br>100% silt, firm, tannish gray, med. plasticity<br>stiff |                                      |              |
| Odor/Sheen:                                | no <sup>wp</sup> odor, slight sheen  |                                      |              |
| Organics, Biota, or Other:                 | organics present (rootlets)  |                                      |              |

| Sediment Description:                      |   |                                      |              |
|--|---|--------------------------------------|--------------|
| Attempt #:                                 | 3   | Redox Potential Discontinuity (RPD): | 0 cm surface |
| Structure:                                 | homogeneous   |                                      |              |
| Density, Color, Minor/Major Constituent %: | gray, <sup>170%</sup> silt w/ <sup>30%</sup> sand, fine, trace gravels<br>dense <sup>wp</sup> stiff |                                      |              |
| Odor/Sheen:                                | hydrocarbon-like odor, <del>no</del> sheen, slight  |                                      |              |
| Organics, Biota, or Other:                 | rootlets  |                                      |              |

| Sediment Description:                      |   |                                      |        |
|--|---|--------------------------------------|--------|
| Attempt #:                                 | 4 <sup>wp</sup> 5   | Redox Potential Discontinuity (RPD): | 1 cm - |
| Structure:                                 | homogeneous   |                                      |        |
| Density, Color, Minor/Major Constituent %: | 0-5cm = silty <sup>30%</sup> sand, gray, fine grained<br>5-23cm = silt w/ sand, fine grained<br>trace gravel, medium dense, trace cobbles |                                      |        |
| Odor/Sheen:                                | no odor or sheen  |                                      |        |
| Organics, Biota, or Other:                 | rootlets, wood fragments  |                                      |        |

Notes:  
 Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                              |   |                          |   |
|------------------------------|---|--------------------------|---|
| Sampling Date:               | 10/10/19                                    | Sampling Location:       | SED-08                                    |
| Vessel:                      | Carolyn Dow                                 | Sampling Personnel:      | CRW CS                                    |
| Weather Conditions:          | Sunny, calm, 50s                            | Subcontractor Personnel: |   |
| Depth Sounding Method:       | Sonar depth sounder                         | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | <u>NOAA PRT03</u> USGS 14211720             | Deckhand:                | Andrew Muth                               |
| Gage Height and Datum:       | 0.61 ft PRD Time: 1135                      | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North           | General River Location:  | RM 6.86W                                  |
| Proposed Coordinates:        |   |                          |   |
|                              | Latitude: <del>45.575696</del> 45.575716    |                          |   |
|                              | Longitude: <del>122.749148</del> 122.749287 |                          |   |

**Attempt Summary**

| Attempt #: | Radius (ft) | Time | Coordinates |              | Water Depth | Recovery Depth | JC? | OLW? | Accepted? | Photo? | Additional Comments | Sample Interval | In 3-PT? |
|------------|-------------|------|-------------|--------------|-------------|----------------|-----|------|-----------|--------|---------------------|-----------------|----------|
|            |             |      | Latitude:   | Longitude:   |             |                |     |      |           |        |                     |                 |          |
| 1          | 162         | 1230 | 45.57612659 | 122.74890009 | 17.8        | 21             | Y   | Y    | Y         | Y      | -                   | 0-21            | Y ✓      |
| 2          | 443         | 1244 | 45.57606773 | 122.74889761 | 15.3        | 22             | Y   | Y    | Y         | Y      | metal piece in jaws | 0-22            | Y ✓      |
| 3          | 842         | 1300 | 45.57609380 | 122.74886741 | 4.5         | 23             | Y   | Y    | Y         | Y      | -                   | 0-23            | Y ✓      |
|            | 140.5       |      |             |              |             |                |     |      |           |        |                     |                 |          |
|            | 140.44      |      |             |              |             |                |     |      |           |        |                     |                 |          |
|            | 52.3        |      |             |              |             |                |     |      |           |        |                     |                 |          |
|            | 21.11       |      |             |              |             |                |     |      |           |        |                     |                 |          |
|            | 7.91        |      |             |              |             |                |     |      |           |        |                     |                 |          |
|            | 22.3        |      |             |              |             |                |     |      |           |        |                     |                 |          |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

**Homogenized 3-Point Composite Sample Description**

|                 |   |
|-----------------|---|
| 3x Attempts #s: | Color, Minor/Major Constituent %, Density:  |
| 1, 2, 3         | Gray sand, fine to coarse; trace gravel, fine; loose; wood fragments. (90% sand; 10% fines), no odor or sheen |

**Sample Information**

| Sample ID     | Sample Time | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
|---------------|-------------|--|-----------------|
| SED-08-SS-1.0 | 1310        | Primary                                  | 6               |

**Additional Comments**

Dug to low water level, positioned offshore near location of vibracore

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|  |                          |                                      |              |
|--|--------------------------|--------------------------------------|--------------|
| Sampling Date:                             | 10/10/19                 | Sampling Location:                   | SED-08       |
| <b>Sediment Description:</b>               |                          |                                      |              |
| Attempt #:                                 | 1                        | Redox Potential Discontinuity (RPD): | 8 cm surface |
| Structure:                                 | homogeneous              |                                      |              |
| Density, Color, Minor/Major Constituent %: |                          |                                      |              |
| 95% sand, f-c, 5% gravel, f-m, gray        |                          |                                      |              |
| lens of silt @ 8 cm bnl, discontinuous     |                          |                                      |              |
| loose                                      |                          |                                      |              |
| Odor/Sheen:                                | no odor or sheen         |                                      |              |
| Organics, Biota, or Other:                 | rootlets and small twigs |                                      |              |
| <b>Sediment Description:</b>               |                          |                                      |              |
| Attempt #:                                 | 2                        | Redox Potential Discontinuity (RPD): | 0 cm surface |
| Structure:                                 | homogeneous              |                                      |              |
| Density, Color, Minor/Major Constituent %: |                          |                                      |              |
| 90% sand, f-c, gray, loose                 |                          |                                      |              |
| 10% silt                                   |                          |                                      |              |
| Odor/Sheen:                                | no odor or sheen         |                                      |              |
| Organics, Biota, or Other:                 | woody debris, rootlets   |                                      |              |
| <b>Sediment Description:</b>               |                          |                                      |              |
| Attempt #:                                 | 3                        | Redox Potential Discontinuity (RPD): | 3 cm         |
| Structure:                                 | homogeneous              |                                      |              |
| Density, Color, Minor/Major Constituent %: |                          |                                      |              |
| 95% sand, f-c, 5% gravel, f-m, loose       |                          |                                      |              |
| trace cobbles                              |                          |                                      |              |
| Odor/Sheen:                                | no odor or sheen         |                                      |              |
| Organics, Biota, or Other:                 | wood fragments           |                                      |              |

Notes:

Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.



**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                              |   |                          |   |
|------------------------------|---|--------------------------|---|
| Sampling Date:               | 10/10/19  | Sampling Location:       | SED-09                                    |
| Vessel:                      | Carolyn Dow   | Sampling Personnel:      | CRW CS                                    |
| Weather Conditions:          | Sunny, 50s, breezy  | Subcontractor Personnel: |   |
| Depth Sounding Method:       | sonar depth sounder   | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | (NOAA PRT03) USGS 14211720  | Deckhand:                | Andrew Muth                               |
| Gage Height and Datum:       | 0.36 ft PRD Time: 1235  | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North   | General River Location:  | RM 6.9                                    |
| Proposed Coordinates:        | Latitude: <del>45.575224</del> 45.575244<br>Longitude: <del>-122.748819</del> -122.748792 |                          |   |

**Attempt Summary**

| Attempt #: | Radius (ft)      | Time | Coordinates |              | Water Depth     | Recovery Depth | JC? | OLW? | Accepted? | Photo? | Additional Comments | Sample Interval | In 3-PT? |
|------------|------------------|------|-------------|--------------|-----------------|----------------|-----|------|-----------|--------|---------------------|-----------------|----------|
|            |                  |      | Latitude:   | Longitude:   |                 |                |     |      |           |        |                     |                 |          |
| 1          | 181.1            | 1418 | 45.57550659 | 122.74825407 | 15.8            | 17             | Y   | Y    | N         | Y      | -                   | -               | -        |
| 2          | <del>169.9</del> | 1430 | 45.57558268 | 122.74833014 | 18.6            | 25             | Y   | Y    | Y         | Y      | -                   | 0-25            | ✓        |
| 3          | <del>164.9</del> | 1444 | 45.57559983 | 122.74831991 | 17.8            | 26             | Y   | Y    | Y         | Y      | -                   | 0-26            | ✓        |
| 4          | <del>174.6</del> | 1453 | 45.57562870 | 122.74838587 | <del>28.6</del> | 27             | Y   | Y    | Y         | Y      | -                   | 0-27            | ✓        |
|            | 10.64            |      |             |              |                 |                |     |      |           |        |                     |                 |          |
|            | 5.91             |      |             |              |                 |                |     |      |           |        |                     |                 |          |
|            | 13.01            |      |             |              |                 |                |     |      |           |        |                     |                 |          |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

**Homogenized 3-Point Composite Sample Description**

|                 |  |
|-----------------|--|
| 3x Attempts #s: | Color, Minor/Major Constituent %, Density:   |
| 2, 3, 4         | Gray, silty sand, very soft, slight hydrocarbon odor (80% sand, 20% fines) slight sheen-like |

**Sample Information**

| Sample ID     | Sample Time | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
|---------------|-------------|--|-----------------|
| SED-09-SS-1.0 | 1515        | Primary                                  | 6               |

**Additional Comments**

Moved north due to low water level of river and location positioned upland

**Surface Sediment Field Sampling Form**  
**Rivermile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|  |  |        |
|--|--|--------|
| <b>Sampling Date:</b> 10/10/19             | <b>Sampling Location:</b>              | SED-09 |
| <b>Sediment Description:</b>               |  |        |
| Attempt #: 2                               | Redox Potential Discontinuity (RPD): 2 | cm     |
| Structure: homogeneous                     |  |        |
| Density, Color, Minor/Major Constituent %: |  |        |
| 80% sand, f, gray                          |  |        |
| 20% fines,                                 |  |        |
| medium dense                               |  |        |
| Odor/Sheen: no odor or sheen               |  |        |
| Organics, Biota, or Other: rootlets        |  |        |

|  |  |            |
|--|--|------------|
| <b>Sediment Description:</b>                           |  |            |
| Attempt #: 3   | Redox Potential Discontinuity (RPD): 0 | cm surface |
| Structure: homogeneous                                 |  |            |
| Density, Color, Minor/Major Constituent %:             |  |            |
| medium dense, gray                                     |  |            |
| sand w/ silt (85%; 15%), trace fine gravel             |  |            |
| f-m sand   |  |            |
| Odor/Sheen: slight hydrocarbon-like odor, slight sheen |  |            |
| Organics, Biota, or Other: rootlets                    |  |            |

|  |  |            |
|--|--|------------|
| <b>Sediment Description:</b>                                     |  |            |
| Attempt #: 4   | Redox Potential Discontinuity (RPD): 0 | cm surface |
| Structure: homogeneous   |  |            |
| Density, Color, Minor/Major Constituent %:                       |  |            |
| loose, gray, 70% fine sand, 30% silt                             |  |            |
| Odor/Sheen: sheen, <del>odor</del> slight hydro carbon-like odor |  |            |
| Organics, Biota, or Other: twigs, organic debris                 |  |            |

Notes:

Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.

**Surface Sediment Field Sampling Form**  
**River mile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                              |  |                          |   |
|------------------------------|--|--------------------------|---|
| Sampling Date:               | 10/10/19   | Sampling Location:       | SED-10                                    |
| Vessel:                      | Carolyn Dow  | Sampling Personnel:      | CRW CS                                    |
| Weather Conditions:          | sunny, 50s, windy  | Subcontractor Personnel: |   |
| Depth Sounding Method:       | sonar depth sounder  | Captain:                 | Eric Parker                               |
| Gage Source (circle one):    | NOAA PRT03 USGS 14211720   | Deckhand:                | Andrew Math                               |
| Gage Height and Datum:       | 0.36 ft PRD Time: 1235   | Sampling Equipment:      | Powergrab, Stainless Steel Bowls & Spoons |
| Horizontal Coordinate Datum: | NAD 1983 Oregon State Plane North  | General River Location:  | RM 6.87                                   |
| Proposed Coordinates:        | Latitude: <del>45.575604</del> - 45.575624<br>Longitude: <del>-122.748782</del> - 122.748755 |                          |   |

**Attempt Summary**

| Attempt #: | Radius (ft) | Time | Coordinates |              | Water Depth | Recovery Depth | JC? | OLW? | Accepted? | Photo? | Additional Comments | Sample Interval | In 3-PT? |
|------------|-------------|------|-------------|--------------|-------------|----------------|-----|------|-----------|--------|---------------------|-----------------|----------|
|            |             |      | Latitude:   | Longitude:   |             |                |     |      |           |        |                     |                 |          |
| 1          | 132.8       | 1320 | 45.57589958 | 122.74841599 | 14.6        | 27             | Y   | Y    | Y         | Y      | -                   | 0-27            | ✓        |
| 2          | 129.600     | 1340 | 45.57587098 | 122.74840193 | 27.8        | 29             | Y   | Y    | Y         | Y      | -                   | 0-29            | ✓        |
| 3          | 44.8        | 1350 | 45.57574560 | 122.74844402 | 29          | 27             | Y   | Y    | Y         | Y      | -                   | 0-27            | ✓        |
|            | 7.2         |      |             |              | 32.8        |                |     |      |           |        |                     |                 |          |
|            | 12.55       |      |             |              |             |                |     |      |           |        |                     |                 |          |
|            | 21.86       |      |             |              |             |                |     |      |           |        |                     |                 |          |

Notes: JC = Jaws Closed; OLW = overlying water, In 3-PT? = sediment used in 3-Point composite.

**Homogenized 3-Point Composite Sample Description**

|                 |  |
|-----------------|--|
| 3x Attempts #s: | Color, Minor/Major Constituent %, Density:   |
| 1, 2, 3         | Gray, silt w/ sand (75% fines, 25% fine sand) very soft, hydrocarbon-like odor, slight green |

**Sample Information**

| Sample ID     | Sample Time | Sample Type (Primary, Duplicate, MS/MSD) | # of Containers |
|---------------|-------------|--|-----------------|
| SED-10-SS-1.0 | 1415        | Primary                                  | 6               |

**Additional Comments**

located offshore to north near railroad buttress due to proposed location positioned upland.

**Surface Sediment Field Sampling Form**  
**River mile 6.55 to 6.9**  
**Siltronic Corporation**  
**Portland, Oregon**



|                       |          |                           |        |
|-----------------------|----------|---------------------------|--------|
| <b>Sampling Date:</b> | 10/10/19 | <b>Sampling Location:</b> | SED-10 |
|-----------------------|----------|---------------------------|--------|

| Sediment Description:                      |                                   |                                      |              |
|--|-----------------------------------|--------------------------------------|--------------|
| Attempt #:                                 | 1                                 | Redox Potential Discontinuity (RPD): | 0 cm surface |
| Structure:                                 | homogeneous                       |                                      |              |
| Density, Color, Minor/Major Constituent %: | 0-20: 100% silt, gray             |                                      |              |
|  | 20-27: 70% sand, 30% silt, gray   |                                      |              |
|  | soft to very soft                 |                                      |              |
| Odor/Sheen:                                | slight hydrocarbon-like, no sheen |                                      |              |
| Organics, Biota, or Other:                 | no wood fragments                 |                                      |              |

| Sediment Description:                      |                                     |                                      |              |
|--|-------------------------------------|--------------------------------------|--------------|
| Attempt #:                                 | 2                                   | Redox Potential Discontinuity (RPD): | 0 cm surface |
| Structure:                                 | homogeneous                         |                                      |              |
| Density, Color, Minor/Major Constituent %: | very soft                           |                                      |              |
|  | 0-7m: 100% silt, gray               |                                      |              |
|  | 7-29: 30% fines gray, silty sand    |                                      |              |
|  | 70% sand, fine                      |                                      |              |
| Odor/Sheen:                                | hydrocarbon-like odor, slight sheen |                                      |              |
| Organics, Biota, or Other:                 |                                     |                                      |              |

| Sediment Description:                      |   |                                      |              |
|--|---|--------------------------------------|--------------|
| Attempt #:                                 | 3                                       | Redox Potential Discontinuity (RPD): | 0 cm surface |
| Structure:                                 | homogeneous                             |                                      |              |
| Density, Color, Minor/Major Constituent %: | very soft                               |                                      |              |
|  | 0-13: 100% silt, gray                   |                                      |              |
|  | 13-27: 30% fines, silty sand, f-n, gray |                                      |              |
|  | 70% sand,                               |                                      |              |
| Odor/Sheen:                                | hydrocarbon-like odor, sheen            |                                      |              |
| Organics, Biota, or Other:                 | rootlets                                |                                      |              |

Notes:

Typical Structure Descriptions: stratified, laminated, fissured, lensed, and homogeneous.