



July 5, 2024

Mr. Steve Teel  
Washington State Department of Ecology  
Toxics Cleanup Program, Southwest Regional Office  
P.O. Box 47775  
Olympia, Washington 98504-7775  
[stee461@ecy.wa.gov](mailto:stee461@ecy.wa.gov)

RE: ***May 2024 Groundwater & Seep Monitoring Report***  
***Former Olympia Dry Cleaners***  
606 Union Avenue SE  
Olympia, Washington 98501-1430  
AEG Project No. 19-222

Dear Mr. Teel:

AEG Atlas, LLC (AEG) has prepared the enclosed ***Groundwater & Seep Monitoring Report*** presenting results of groundwater sampling and analysis activities conducted on May 30, 2024, at the above-referenced site in Olympia, Washington (Site). Currently, selected on-Site monitoring wells (MW-9, MW-11, and MW-14) and two locations at the seep (SEEP and SEEP-POST) are sampled on a 15-month frequency. The location of the Site is illustrated on Figure 1, *Site Vicinity Map*. Locations of Site features, previous sample locations, monitoring wells, and seep sample locations are detailed in Figure 2, *Site Map*.

**WORK PERFORMED [May 2024]:**

- Obtained depth to groundwater data from five groundwater wells (MW-6, MW-9, MW-11, MW-13, and MW-14).
- Purged and sampled three groundwater monitoring wells (MW-9, MW-11, and MW-14).
- Attempted to sample the seep at the source (SEEP) and downgradient of the filter sock (SEEP-POST). Both areas were dry at the time of sampling, and no sample was collected.

**WORK PROPOSED [August 2025]:**

- Obtain depth to groundwater data from five groundwater wells (MW-6, MW-9, MW-11, MW-13, and MW-14).
- Purge and sample three groundwater monitoring wells (MW-9, MW-11, and MW-14).
- Sample the seep at the source (SEEP) and downgradient of the filter sock (SEEP-POST).

**May 2024 Groundwater & Seep Monitoring Report**  
 Olympia Dry Cleaners (Former), Olympia Washington  
 AEG Project No. 19-222  
 July 5, 2024

**SUMMARY:**

| Sampling Event:                               | May 30, 2024            | Values                                                                                   |
|-----------------------------------------------|-------------------------|------------------------------------------------------------------------------------------|
| Range of Depths to Groundwater:               | 0.00 to 3.28            | Feet below top of well casing (Table 1, <i>Summary of Groundwater Elevations</i> )       |
| Range of Groundwater Elevations:              | 20.02 to 27.28          | Feet above Mean Sea Level (Table 1, <i>Summary of Groundwater Elevations</i> )           |
| Groundwater Gradient: (Direction / Magnitude) | North-northeast / 0.038 | Feet per foot (ft/ft), determined using data from MW-06, MW-09, MW-11, MW-13, and MW-14. |
| Measurable NAPL Detected:                     | No                      |                                                                                          |
| Measurable NAPL Thickness:                    | N/A                     |                                                                                          |
| Current Remedial Action:                      | Compliance Monitoring   |                                                                                          |

**DISCUSSION:**

Constituents of concern (COCs) were detected in monitoring well MW-09 and MW-14. Detected concentrations are summarized below. Analytical results for this sampling event, and historical analytical results, are presented in the attached Table 2, *Summary of Groundwater Monitoring Analytical Results*.

| May 2024                     |      |       |             |               |                |
|------------------------------|------|-------|-------------|---------------|----------------|
| Well ID                      | PCE  | TCE   | cis-1,2-DCE | trans-1,2-DCE | Vinyl chloride |
| MW-09                        | <1.0 | <0.40 | <1.0        | <1.0          | <b>0.90</b>    |
| MW-14                        | <1.0 | <0.40 | <b>1.8</b>  | <1.0          | <b>0.60</b>    |
| MTCA Method A Cleanup Levels | 5    | 5     | 16*         | 160*          | 0.2            |

µg/L = micrograms per liter

PCE = Tetrachloroethylene

TCE = Trichloroethylene

DCE = Dichloroethylene

\* MTCA Method B cleanup level; Method A cleanup level not established

No COCs were detected above the laboratory detection limits for monitoring well MW-11.

**SEEP DISCUSSION:**

Both SEEP locations were dry at the time of sampling and no seep samples were analyzed. Analytical results are presented in the attached Table 3, *Summary of Groundwater Seep Analytical Results*.

**CLOSING:**

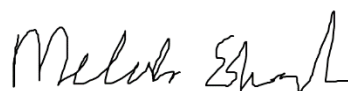
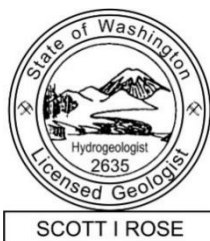
AEG appreciates the opportunity to provide environmental consulting services for this Site. Should you have questions or require additional information, please contact our office at 360-352-9835.

Sincerely,

**AEG Atlas, LLC**



Scott Rose, L.H.G.  
Director of Technical Services



Edvard Melesh, R.S.A.  
Staff Geologist

Attachments: Figure 1, *Site Vicinity Map*

Figure 2, *Groundwater Elevation Contour Map 05/30/2024*

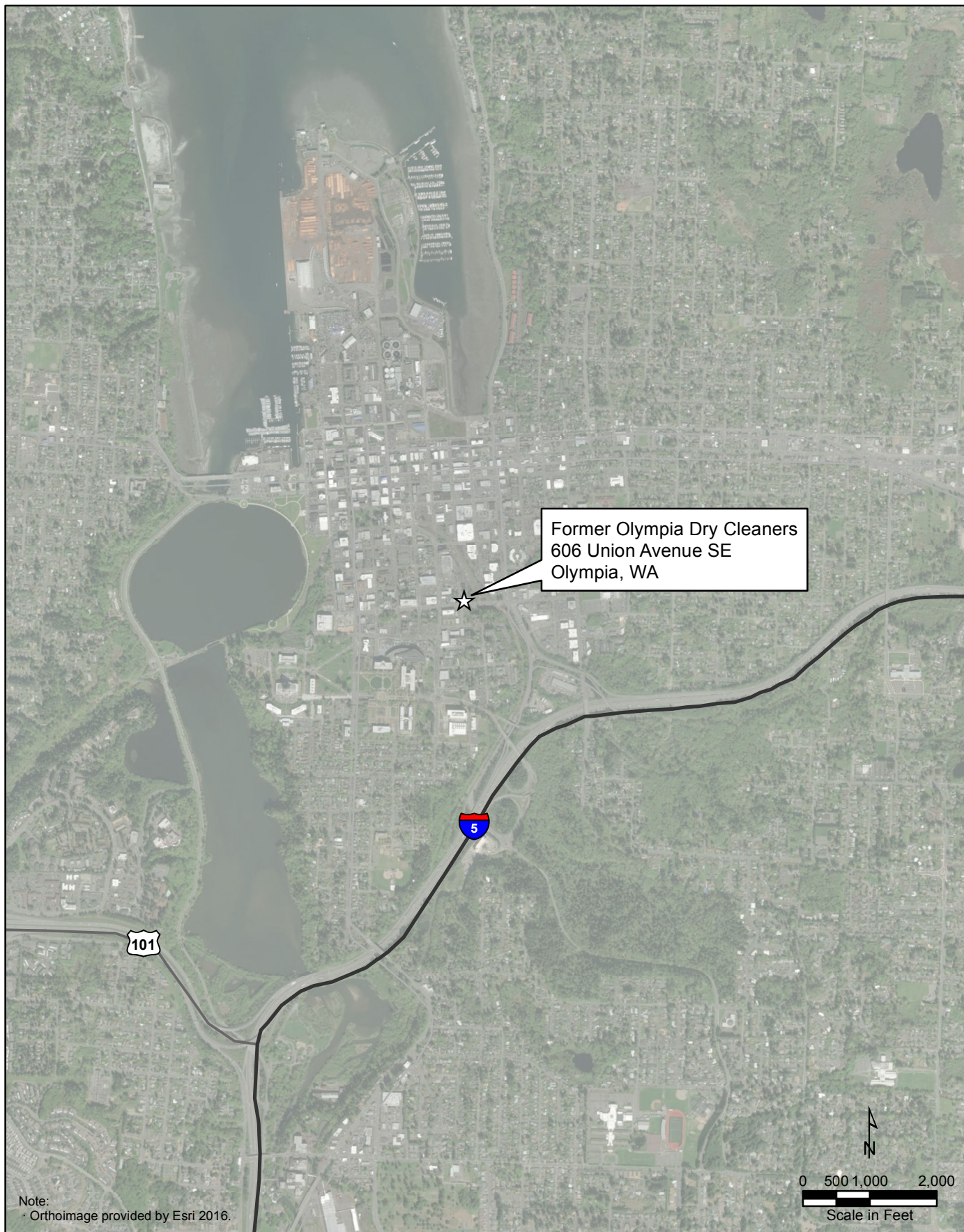
Table 1 – *Summary of Groundwater Elevations*

Table 2 – *Summary of Groundwater Monitoring Analytical Results*

Table 3 – *Summary of Groundwater Seep Analytical Results*

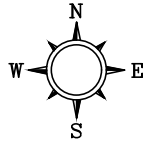
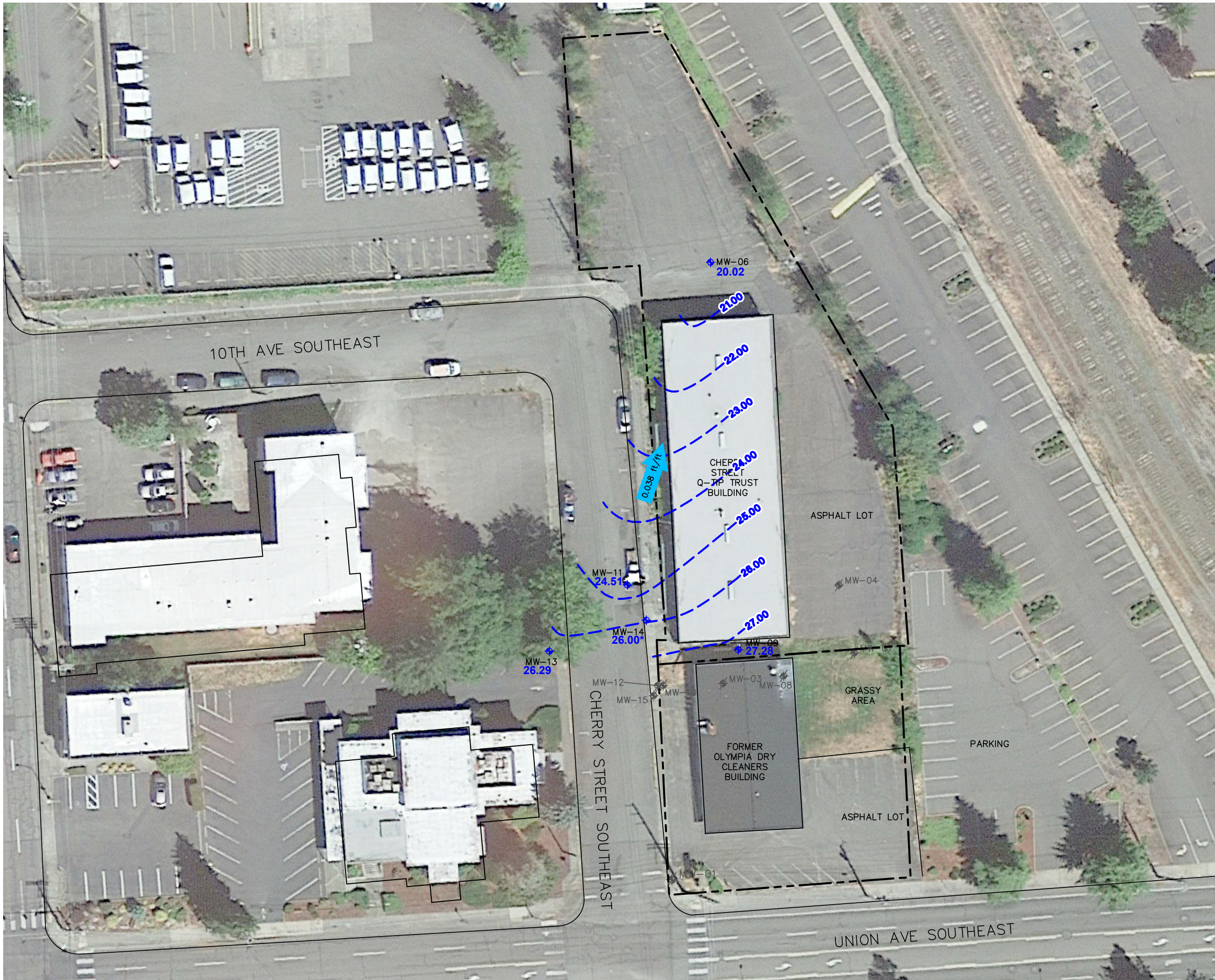
Appendix A – Laboratory Datasheets

## **FIGURES**



**Former Olympia  
Dry Cleaners Site  
Olympia, Washington**

**Figure 1  
Site Vicinity Map**



- LEGEND
- PARCEL BOUNDARY
  - MW-11 ◆ MONITORING WELL
  - MW-07 ✖ ABANDONED MONITORING WELL
  - 24.51 GROUNDWATER ELEVATION (FEET)
  - \* INDICATES A WELL WITH ARTESIAN GROUNDWATER. REPORTED GROUNDWATER ELEVATION IS AN ESTIMATE
  - 24.00 - GROUNDWATER ELEVATION CONTOUR LINE (FEET)
  - 0.038 ft/ft APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)

- NOTES
1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
  2. THIS DRAWING IS FOR INFORMATION PURPOSES. IT IS INTENDED TO ASSIST IN SHOWING FEATURES DISCUSSED IN AN ATTACHED DOCUMENT.

REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG ATLAS, LLC.



FIGURE 2  
GROUNDWATER ELEVATION CONTOUR MAP  
05/30/2024

FORMER OLYMPIA DRY CLEANERS  
606 UNION AVE SOUTHEAST  
OLYMPIA, WASHINGTON

## **TABLES**

**Table 1 - Summary of Groundwater Elevations**  
Olympia Dry Cleaners  
Olympia, Washington

| Well No./<br>TOC<br>Elevation <sup>1, 2</sup> | Date       | Depth to<br>Water | Actual Groundwater<br>Elevation | Change in Elevation |
|-----------------------------------------------|------------|-------------------|---------------------------------|---------------------|
| MW-06                                         | 3/12/2016  | 1.46              | 18.66                           | --                  |
| 20.12                                         | 6/9/2016   | 0.86              | 19.26                           | 0.60                |
|                                               | 9/29/2016  | 0.20              | 19.92                           | 0.66                |
|                                               | 12/20/2016 | 1.38              | 18.74                           | -1.18               |
|                                               | 3/10/2017  | 0.65              | 19.47                           | 0.73                |
|                                               | 10/31/2017 | 3.83              | 16.29                           | -3.18               |
|                                               | 3/30/2018  | 1.62              | 18.50                           | 2.21                |
|                                               | 3/3/2020   | 0.76              | 19.36                           | 0.86                |
|                                               | 9/10/2021  | 0.12              | 20.00                           | 0.64                |
|                                               | 4/7/2023   | 0.36              | 19.76                           | -0.24               |
|                                               | 5/30/2024  | 0.10              | 20.02                           | 0.26                |
| MW-09                                         | 3/12/2016  | 2.32              | 17.80                           | --                  |
| 30.56                                         | 6/9/2016   | 3.41              | 27.15                           | 9.35                |
|                                               | 9/29/2016  | 3.44              | 27.12                           | -0.03               |
|                                               | 12/20/2016 | 3.40              | 27.16                           | 0.04                |
|                                               | 3/10/2017  | 3.22              | 27.34                           | 0.18                |
|                                               | 10/31/2017 | 3.34              | 27.22                           | -0.12               |
|                                               | 3/30/2018  | 3.31              | 27.25                           | 0.03                |
|                                               | 3/3/2020   | 3.31              | 27.25                           | 0.00                |
|                                               | 6/11/2020  | 4.28              | 26.28                           | -0.97               |
|                                               | 9/10/2021  | 3.50              | 27.06                           | 0.78                |
|                                               | 4/7/2023   | 3.23              | 27.33                           | 0.27                |
|                                               | 5/30/2024  | 3.28              | 27.28                           | -0.05               |
| MW-11 <sup>3</sup>                            | 3/12/2016  | 0.00              | 20.12                           | --                  |
| 24.66                                         | 6/9/2016   | 0.00              | 20.12                           | 0.00                |
|                                               | 9/29/2016  | 0.00              | 24.66                           | 4.54                |
|                                               | 12/20/2016 | 0.50              | 24.16                           | -0.50               |
|                                               | 3/10/2017  | 0.38              | 24.28                           | 0.12                |
|                                               | 10/31/2017 | 0.34              | 24.32                           | 0.04                |
|                                               | 3/30/2018  | 0.39              | 24.27                           | -0.05               |
|                                               | 3/3/2020   | 0.00              | 24.66                           | 0.39                |
|                                               | 6/11/2020  | 0.00              | 24.66                           | 0.00                |
|                                               | 9/10/2021  | 0.00              | 24.66                           | 0.00                |
|                                               | 4/7/2023   | 0.60              | 24.06                           | -0.60               |
|                                               | 5/30/2024  | 0.15              | 24.51                           | 0.45                |

**Table 1 - Summary of Groundwater Elevations**  
Olympia Dry Cleaners  
Olympia, Washington

| Well No./<br>TOC<br>Elevation <sup>1, 2</sup> | Date       | Depth to<br>Water | Actual Groundwater<br>Elevation | Change in Elevation |
|-----------------------------------------------|------------|-------------------|---------------------------------|---------------------|
| MW-13                                         | 3/12/2016  | 0.07              | 20.05                           | --                  |
| 26.38                                         | 6/9/2016   | 0.17              | 19.95                           | -0.10               |
|                                               | 9/29/2016  | 0.42              | 25.96                           | 6.01                |
|                                               | 12/20/2016 | 0.20              | 26.18                           | 0.22                |
|                                               | 3/10/2017  | 0.16              | 26.22                           | 0.04                |
|                                               | 10/31/2017 | 1.33              | 25.05                           | -1.17               |
|                                               | 3/30/2018  | 0.18              | 26.20                           | 1.15                |
|                                               | 3/3/2020   | 0.10              | 26.28                           | 0.08                |
|                                               | 9/10/2021  | 0.07              | 26.31                           | 0.03                |
|                                               | 4/7/2023   | 0.12              | 26.26                           | -0.05               |
|                                               | 5/30/2024  | 0.09              | 26.29                           | 0.03                |
| MW-14 <sup>3</sup>                            | 3/12/2016  | 0.00              | 26.00                           | --                  |
| 26.00                                         | 6/9/2016   | 0.00              | 26.00                           | 0.00                |
|                                               | 9/29/2016  | 0.00              | 26.00                           | 0.00                |
|                                               | 12/20/2016 | 0.00              | 26.00                           | 0.00                |
|                                               | 3/10/2017  | 0.00              | 26.00                           | 0.00                |
|                                               | 10/31/2017 | 0.00              | 26.00                           | 0.00                |
|                                               | 3/30/2018  | 0.00              | 26.00                           | 0.00                |
|                                               | 3/3/2020   | 0.00              | 26.00                           | 0.00                |
|                                               | 6/11/2020  | 0.00              | 26.00                           | 0.00                |
|                                               | 9/10/2021  | 0.00              | 26.00                           | 0.00                |
|                                               | 4/7/2023   | 0.00              | 26.00                           | 0.00                |
|                                               | 5/30/2024  | 0.00              | 26.00                           | 0.00                |

Notes:

All values reported in feet

TOC = Top of casing elevation relative to assigned benchmark.

-- = Not measured, not available, or not applicable

<sup>1</sup> Top of well casing survey information from SoundEarth Strategies, Inc.

<sup>2</sup> Elevations reported in North American Vertical Datum of 1988.

<sup>3</sup> Depth to water values of 0.00 indicate a location with artesian groundwater; reported groundwater elevations are considered estimates.

**Table 2 - Summary of Groundwater Monitoring Analytical Results**

Olympia Dry Cleaners

Olympia, Washington

| Sample Location    | Status <sup>1</sup>          | Date Collected | PCE  | TCE         | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
|--------------------|------------------------------|----------------|------|-------------|-------------|---------------|---------|----------------|
| MW-06 <sup>3</sup> | Pre-Remediation <sup>1</sup> | 8/13/2013      | <1.0 | <1.0        | <1.0        | <1.0          | <1.0    | <0.20          |
|                    | Post-Remediation             | 3/12/2016      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 6/9/2016       | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 9/29/2016      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 12/20/2016     | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/10/2017      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 10/31/2017     | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/30/2018      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/3/2020       | <1.0 | <0.4        | <1.0        | <1.0          | <0.5    | <0.20          |
| MW-09              | Pre-Remediation              | 8/13/2013      | <1.0 | <1.0        | <b>4.1</b>  | <1.0          | <1.0    | <b>2.7</b>     |
|                    | Post-Remediation             | 3/12/2016      | <1.0 | <b>2.2</b>  | <b>11</b>   | <1.0          | <1.0    | <b>5.0</b>     |
|                    |                              | 6/9/2016       | <1.0 | <b>3.2</b>  | <b>26</b>   | <1.0          | <1.0    | <b>9.8</b>     |
|                    |                              | 9/29/2016      | <1.0 | <b>2.8</b>  | <b>27</b>   | <1.0          | <1.0    | <b>11</b>      |
|                    |                              | 12/20/2016     | <1.0 | <b>0.69</b> | <b>10</b>   | <1.0          | <1.0    | <b>6.9</b>     |
|                    |                              | 3/10/2017      | <1.0 | <b>0.61</b> | <b>6.2</b>  | <1.0          | <1.0    | <b>2.6</b>     |
|                    |                              | 10/31/2017     | <1.0 | <b>1.7</b>  | <b>12</b>   | <1.0          | <1.0    | <b>6.0</b>     |
|                    |                              | 3/30/2018      | <1.0 | <b>2.1</b>  | <b>6.2</b>  | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/3/2020       | <1.0 | <b>1.8</b>  | <b>15.0</b> | <1.0          | <1.0    | <b>6.7</b>     |
|                    |                              | 6/11/2020      | <1.0 | <0.4        | <b>3.9</b>  | <1.0          | <0.5    | <b>4.8</b>     |
|                    |                              | 9/10/2021      | <1.0 | <0.4        | <b>1.2</b>  | <1.0          | <0.5    | <b>7.0</b>     |
|                    |                              | 4/7/2023       | <1.0 | <0.4        | <b>3.0</b>  | <1.0          | <0.5    | <b>1.7</b>     |
|                    |                              | 5/30/2024      | <1.0 | <0.40       | <1.0        | <1.0          | <0.50   | <b>0.90</b>    |
| MW-11              | Pre-Remediation              | 8/13/2013      | <1.0 | <1.0        | <1.0        | <1.0          | <1.0    | <0.20          |
|                    | Post-Remediation             | 3/12/2016      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 6/9/2016       | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 9/29/2016      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 12/20/2016     | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/10/2017      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 10/31/2017     | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/30/2018      | <1.0 | <b>0.60</b> | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/3/2020       | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 6/11/2020      | <1.0 | <0.4        | <1.0        | <1.0          | <0.5    | <0.20          |
|                    |                              | 9/10/2021      | <1.0 | <0.4        | <1.0        | <1.0          | <0.5    | <0.20          |
|                    |                              | 4/7/2023       | <1.0 | <0.4        | <1.0        | <1.0          | <0.5    | <0.20          |
|                    |                              | 5/30/2024      | <1.0 | <0.40       | <1.0        | <1.0          | <0.50   | <0.20          |
| MW-13 <sup>3</sup> | Pre-Remediation              | 8/13/2013      | <1.0 | <1.0        | <1.0        | <1.0          | <1.0    | <0.20          |
|                    | Post-Remediation             | 3/12/2016      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 6/9/2016       | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 9/29/2016      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 12/20/2016     | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/10/2017      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 10/31/2017     | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/30/2018      | <1.0 | <0.50       | <1.0        | <1.0          | <1.0    | <0.20          |
|                    |                              | 3/3/2020       | <1.0 | <0.4        | <1.0        | <1.0          | <0.5    | <0.20          |

**Table 2 - Summary of Groundwater Monitoring Analytical Results**  
Olympia Dry Cleaners  
Olympia, Washington

| Sample Location             | Status <sup>1</sup> | Date Collected          | PCE        | TCE        | cis-1,2-DCE | trans-1,2-DCE | 1,1-DCE | Vinyl Chloride |
|-----------------------------|---------------------|-------------------------|------------|------------|-------------|---------------|---------|----------------|
| MW-14                       | Pre-Remediation     | 8/13/2013               | <1.0       | <1.0       | <1.0        | <1.0          | <1.0    | <0.20          |
|                             | Post-Remediation    | 3/8/2016                | <b>52</b>  | <b>17</b>  | <b>23</b>   | <1.0          | <1.0    | <b>2.4</b>     |
|                             |                     | 6/9/2016 <sup>2</sup>   | <b>99</b>  | <b>34</b>  | <b>33</b>   | <1.0          | <1.0    | <b>2.8</b>     |
|                             |                     | 9/29/2016               | <b>96</b>  | <b>40</b>  | <b>42</b>   | <1.0          | <1.0    | <0.20          |
|                             |                     | 12/20/2016 <sup>2</sup> | <b>23</b>  | <b>11</b>  | <b>7.3</b>  | <1.0          | <1.0    | <b>0.79</b>    |
|                             |                     | 3/10/2017               | <b>38</b>  | <b>24</b>  | <b>14</b>   | <1.0          | <1.0    | <0.20          |
|                             |                     | 10/31/2017              | <b>32</b>  | <b>24</b>  | <b>15</b>   | <1.0          | <1.0    | <b>2.2</b>     |
|                             |                     | 3/30/2018               | <b>1.2</b> | <b>2.0</b> | <b>2.2</b>  | <1.0          | <1.0    | <0.20          |
|                             |                     | 3/3/2020                | <1.0       | <0.50      | <1.0        | <1.0          | <1.0    | <0.20          |
|                             |                     | 6/11/2020               | <1.0       | <0.4       | <1.0        | <1.0          | <0.5    | <0.20          |
|                             |                     | 9/10/2021               | <1.0       | <0.4       | <b>3.8</b>  | <1.0          | <0.5    | <b>0.58</b>    |
|                             |                     | 4/7/2023                | <1.0       | <0.4       | <1.0        | <1.0          | <0.5    | <0.20          |
|                             |                     | 5/30/2024               | <1.0       | <0.40      | <b>1.8</b>  | <1.0          | <0.50   | <b>0.60</b>    |
| Artesian Well               |                     | 8/26/2022               | <1.0       | <0.4       | <1.0        | <1.0          | <0.5    | <0.20          |
| PQL                         |                     |                         | 1.0        | 0.4/0.5    | 1.0         | 1.0           | 0.5/1.0 | 0.20           |
| MTCA Method A Cleanup Level |                     |                         | 5          | 5          | 16*         | 160*          | 7.7*    | 0.2            |

Notes:

All values reported in micrograms per liter (µg/L)

-- = Not analyzed for constituent

< = Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

**Red Bold** indicates the detected concentration exceeds Ecology MTCA Method A cleanup level

**Bold** indicates the detected concentration is below Ecology MTCA Method A cleanup levels

\* MTCA Method B cleanup level; Method A cleanup level not established

<sup>1</sup>Pre-remediation groundwater monitoring data collected by SoundEarth Strategies, Inc.

<sup>2</sup> Field duplicate taken at this location on this date; the greatest concentration between the two samples is shown.

<sup>3</sup>Ceased monitoring of this well as of 6/2/20.

Data collected between 2016-2018 collected by Floyd Snider.

PCE = Tetrachloroethylene

TCE = Trichloroethylene

DCE = Dichloroethylene

**Table 3 - Summary of Groundwater Seep Analytical Results**

Olympia Dry Cleaners

Olympia, Washington

| Sample Location      | Status                       | Date Collected | Halogenated Volatile Organic Compounds |      |             |               |                |
|----------------------|------------------------------|----------------|----------------------------------------|------|-------------|---------------|----------------|
|                      |                              |                | PCE                                    | TCE  | cis-1,2-DCE | trans-1,2-DCE | Vinyl Chloride |
| SEEP                 | Pre-Remediation <sup>1</sup> | 7/10/2008      | 390                                    | 580  | 2,500       | 12            | 190            |
|                      | Post-Remediation             | 3/8/2016       | 33                                     | 15   | 110         | <1.0          | 15             |
|                      |                              | 3/30/2016      | 23                                     | 17   | 160         | <1.0          | 22             |
|                      |                              | 6/9/2016       | 16                                     | 18   | 170         | 1.3           | 20             |
|                      |                              | 9/29/2016      | 16                                     | 30   | 180         | <1.0          | 16             |
|                      |                              | 12/20/2016     | 56                                     | 44   | 110         | <1.0          | 10             |
|                      |                              | 3/10/2017      | 13                                     | 7.6  | 19          | <1.0          | 1.8 J          |
|                      |                              | 6/21/2017      | 12                                     | 8.5  | 57          | <1.0          | 6.2            |
|                      |                              | 10/31/2017     | 14                                     | 19   | 74          | <1.0          | 12             |
|                      |                              | 1/4/2018       | 20                                     | 34   | 138         | <1.0          | 7.6            |
|                      |                              | 3/22/2018      | 23                                     | 17   | 52          | <1.0          | 2.45           |
|                      |                              | 3/30/2018      | 19                                     | 16   | 60          | <1.0          | 1.9            |
|                      |                              | 6/23/2018      | 5.4                                    | 5.4  | 34          | <1.0          | 4.7            |
|                      |                              | 9/30/2018      | 1.7                                    | 5.3  | 45.7        | <1.0          | 3.6            |
|                      |                              | 3/20/2019      | 0.96 J                                 | 3.4  | 48          | <1.0          | 1.4            |
|                      |                              | 7/3/2019       | <1.0                                   | 0.68 | 8.5         | <1.0          | 0.89           |
|                      |                              | 12/7/2019      | 2.8                                    | 4.0  | 49.3        | <1.0          | 1.6            |
|                      |                              | 3/3/2020       | 2.6                                    | 2.8  | 37.1        | <1.0          | 1.2            |
|                      |                              | 6/2/2020       | 0.63 J                                 | 1.3  | 26          | <1.0          | 4.8            |
|                      |                              | 12/18/2020     | 3.0                                    | 2.6  | 40          | <1.0          | 3.8            |
|                      |                              | 6/21/2021      | 1.6                                    | 1.4  | 29          | <1.0          | 2.3            |
|                      |                              | 9/10/2021      | <1.0                                   | 1.2  | 20          | <1.0          | 5.2            |
|                      |                              | 12/9/2021      | 2.4                                    | 1.5  | 37          | <1.0          | 8.1            |
|                      |                              | 4/7/2023       | 1.1                                    | 0.93 | 11          | <1.0          | <0.2           |
|                      |                              | 5/30/2024      | Seep was dry; no sample collected      |      |             |               |                |
| SEEP-CB <sup>2</sup> | Pre-Remediation              | 10/15/2008     | <2.0                                   | <1.0 | <1.0        | <1.0          | <1.0           |
|                      | Post-Remediation             | 6/9/2016       | <1.0                                   | <0.5 | 1.8         | <1.0          | <0.2           |
|                      |                              | 3/22/2017      | <1.0                                   | 0.72 | 1.3         | <1.0          | <0.2           |
|                      |                              | 3/30/2018      | <1.0                                   | <0.5 | <1.0        | <1.0          | <0.2           |
|                      |                              | 6/21/2021      | <1.0                                   | <0.4 | <1.0        | <1.0          | <0.2           |
|                      |                              | 9/10/2021      | <1.0                                   | <0.4 | <1.0        | <1.0          | <0.2           |
|                      |                              | 12/9/2021      | <1.0                                   | <0.4 | <1.0        | <1.0          | <0.2           |

**Table 3 - Summary of Groundwater Seep Analytical Results**

Olympia Dry Cleaners

Olympia, Washington

| Sample Location              | Status           | Date Collected | Halogenated Volatile Organic Compounds |           |                                   |               |                |
|------------------------------|------------------|----------------|----------------------------------------|-----------|-----------------------------------|---------------|----------------|
|                              |                  |                | PCE                                    | TCE       | cis-1,2-DCE                       | trans-1,2-DCE | Vinyl Chloride |
| SEEP-POST <sup>3</sup>       | Post-Remediation | 9/29/2016      | <1.0                                   | 0.55      | 2.3                               | <1.0          | 0.62           |
|                              |                  | 12/20/2016     | 10                                     | 8.0       | 19                                | <1.0          | 2.2            |
|                              |                  | 3/10/2017      | 3.4 J                                  | 2.5       | 6.3                               | <1.0          | 1.3            |
|                              |                  | 3/22/2017      | 4.8                                    | 4.1       | 10                                | <1.0          | 1.3            |
|                              |                  | 3/30/2017      | <1.0                                   | <0.50     | <1.0                              | <1.0          | <0.20          |
|                              |                  | 6/21/2017      | <1.0                                   | <0.50     | <1.0                              | <1.0          | <0.20          |
|                              |                  | 10/31/2017     | <1.0                                   | 0.58      | 2.5                               | <1.0          | <0.20          |
|                              |                  | 1/8/2018       | <1.0                                   | 0.76      | 2.8                               | <1.0          | <0.20          |
|                              |                  | 3/22/2018      | <1.0                                   | 0.6       | 2.6                               | <1.0          | <0.20          |
|                              |                  | 3/30/2018      | <1.0                                   | <0.50     | <1.0                              | <1.0          | <0.20          |
|                              |                  | 6/23/2018      | <1.0                                   | <0.50     | 2.0                               | <1.0          | <0.20          |
|                              |                  | 9/30/2018      | <1.0                                   | 1.6       | 14.4                              | <1.0          | 1.5            |
|                              |                  | 3/20/2019      | 4.8                                    | 12        | 112                               | <1.0          | 3.6            |
|                              |                  | 7/3/2019       | <1.0                                   | 0.45      | 6.8                               | <1.0          | 0.61           |
|                              |                  | 12/7/2019      | 0.55 J                                 | 1.1       | 14.5                              | <1.0          | 0.43           |
|                              |                  | 3/3/2020       | <1.0                                   | 0.77      | 12.1                              | <1.0          | 0.48           |
|                              |                  | 6/2/2020       | <1.0                                   | 0.41      | 12                                | <1.0          | 1.3            |
|                              |                  | 12/18/2020     | <1.0                                   | <1.0      | 5.8                               | <1.0          | <0.20          |
|                              |                  | 6/21/2021      | <1.0                                   | <0.4      | 5.1                               | <1.0          | 0.44           |
|                              |                  | 9/10/2021      | <1.0                                   | <0.4      | 3.9                               | <1.0          | 1.6            |
|                              |                  | 12/9/2021      | <1.0                                   | 0.54      | 16                                | <1.0          | 2.3            |
|                              |                  | 4/7/2023       | <1.0                                   | <0.4      | 2.9                               | <1.0          | <0.2           |
|                              |                  |                |                                        | 5/30/2024 | Seep was dry; no sample collected |               |                |
| PQL                          |                  |                | 1.0                                    | 1.0       | 1.0                               | 1.0           | 0.2            |
| Surface Water Cleanup Levels |                  |                | 3.3                                    | 30        | NA                                | 10,000        | 2.4            |

Notes:

All values reported in micrograms per liter (µg/L)

-- = Not analyzed for constituent

< = Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

**Red Bold** indicates the detected concentration exceeds Ecology MTCA Method A cleanup level

**Bold** indicates the detected concentration is below Ecology MTCA Method A cleanup levels

\* MTCA Method B cleanup level; Method A cleanup level not established

<sup>1</sup>Pre-remediation seep samples were collected approximately 16 feet south of the current seep sampling location. However, both pre- and post-remediation samples are representative of the same source of seep water.

<sup>2</sup>Sample collected at the downstream catch basin. Pre-remediation sample was collected by the Washington State Department of Ecology from approximately the same location and named "Street - 2."

<sup>3</sup>Sample collected downstream of the carbon filter sock to demonstrate treatment efficiency.

J = The analyte was detected; the concentration is considered to be an estimate.

NA = Not Applicable; no cleanup level has been established for this constituent.

PCE = Tetrachloroethylene

TCE = Trichloroethylene

DCE = Dichloroethylene

## **APPENDIX A**

### **LABORATORY DATASHEETS**



# Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

Phone (360) 352-2110 • libbyenv@gmail.com

June 03, 2024

Scott Rose

AEG an Atlas Geosciences NW Company

2633 Parkmont Lane SW, Suite A

Olympia, WA 98502

RE: Former Olympia Dry Cleaners

Work Order Number: L24E093

Enclosed are the results of analyses for samples received by our laboratory on 5/30/2024.

Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please feel free to contact us. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

A handwritten signature in black ink, appearing to read "Sherry Chilcutt", is written over a light gray rectangular background.

Sherry Chilcutt  
Senior Chemist

# Libby Environmental, Inc.

# Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Rd NE  
Olympia, WA 98506

Ph: 360-352-2110  
Fax: 360-352-4154

Client: AEG

Address: 2633 Parkmount Lane SW, Suite A

City: Olympia State: WA Zip: 98502

Phone: (360) 352-9835 Fax: (360) 352-8164

Client Project # 19-222

Date: 5/30/24

Page: 1 of 1

Project Manager: Scott Rose

Project Name: Former Olympia Dry Cleaners

Location: 606 Union Ave City, State: Olympia, WA

Collector: Diana Ojeda Date of Collection: 5/30/24

Email: Srose@AEGWA.com

Page 2 of 10

| Sample Number | Depth | Time | Sample Type | Container Type | PCE w/ Daughter Product |  |  |  |  |  |  |  |  |  |  |  | Field Notes |
|---------------|-------|------|-------------|----------------|-------------------------|--|--|--|--|--|--|--|--|--|--|--|-------------|
|               |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 1 MW-9        | -     | 0918 | GW          | VOA            | X                       |  |  |  |  |  |  |  |  |  |  |  |             |
| 2 MW-11       | -     | 1024 | GW          | VOA            | X                       |  |  |  |  |  |  |  |  |  |  |  |             |
| 3 MW-14       | -     | 0957 | GW          | VOA            | X                       |  |  |  |  |  |  |  |  |  |  |  |             |
| 4             |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 5             |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 6             |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 7             |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 8             |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 9             |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 10            |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 11            |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 12            |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 13            |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 14            |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 15            |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 16            |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |
| 17            |       |      |             |                |                         |  |  |  |  |  |  |  |  |  |  |  |             |

|                                     |                                  |                                  |                                  |                                                                                                                                                                                |                                                            |
|-------------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Relinquished by: <u>Diana Ojeda</u> | Date / Time: <u>5/30/24 1145</u> | Received by: <u>Kristine Koe</u> | Date / Time: <u>5-30-24 1145</u> | <b>Sample Receipt</b><br>Good Condition? <u>Y</u> <u>N</u><br>Temp. <u>      </u> °C<br>Seals Intact? <u>Y</u> <u>N</u> <u>N/A</u><br>Total Number of Containers <u>      </u> | <b>Remarks:</b><br><br><br><br><b>TAT: 24HR 48HR 5-DAY</b> |
| Relinquished by:                    | Date / Time:                     | Received by:                     | Date / Time:                     |                                                                                                                                                                                |                                                            |
| Relinquished by:                    | Date / Time:                     | Received by:                     | Date / Time:                     |                                                                                                                                                                                |                                                            |
| Relinquished by:                    | Date / Time:                     | Received by:                     | Date / Time:                     |                                                                                                                                                                                |                                                            |



# Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company  
2633 Parkmont Lane SW, Suite A  
Olympia, WA 98502

**Project:** Former Olympia Dry Cleaners  
**Project Number:** 19-222  
**Project Manager:** Scott Rose

**City/State:** Olympia, WA  
**Work Order:** L24E093  
**Reported:** 06/03/2024 13:39

## Notes and Definitions

| Item                                                                     | Definition                                           |
|--------------------------------------------------------------------------|------------------------------------------------------|
| RL                                                                       | Reporting Limit                                      |
| ND                                                                       | Analyte NOT DETECTED at or above the reporting limit |
| DET                                                                      | Analyte DETECTED at or above the reporting limit     |
| Qual                                                                     | Qualifier                                            |
| All results reported on an "as received" basis unless indicated by "Dry" |                                                      |

## Work Order Sample Summary

| Lab ID     | Sample | Matrix | Date Sampled | Date Received |
|------------|--------|--------|--------------|---------------|
| L24E093-01 | MW-9   | Water  | 05/30/2024   | 05/30/2024    |
| L24E093-02 | MW-11  | Water  | 05/30/2024   | 05/30/2024    |
| L24E093-03 | MW-14  | Water  | 05/30/2024   | 05/30/2024    |



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**City/State:** Olympia, WA  
**Work Order:** L24E093  
**Reported:** 06/03/2024 13:39

## Libby Environmental Sample Detection Summary

| Analyte                | Result | Qual | Units            | RL   | Method |
|------------------------|--------|------|------------------|------|--------|
| Sample: <b>MW-9</b>    |        |      | Lab#: L24E093-01 |      |        |
| Vinyl Chloride         | 0.90   |      | ug/L             | 0.20 | 8260D  |
| Sample: <b>MW-14</b>   |        |      | Lab#: L24E093-03 |      |        |
| Vinyl Chloride         | 0.60   |      | ug/L             | 0.20 | 8260D  |
| cis-1,2-Dichloroethene | 1.8    |      | ug/L             | 1.0  | 8260D  |

Note: If no entry is made, then no target compounds were detected.



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**City/State:** Olympia, WA  
**Work Order:** L24E093  
**Reported:** 06/03/2024 13:39

## Sample Results

**Client Sample ID:** MW-9

**Lab ID:** L24E093-01 (Water)

| Analyte                                                      | Result | Qual | RL       | Units | Date Analyzed | Analyst Initials |
|--------------------------------------------------------------|--------|------|----------|-------|---------------|------------------|
| <b><u>Volatile Organic Compounds by EPA Method 8260D</u></b> |        |      |          |       |               |                  |
| Vinyl Chloride (SIM)                                         | 0.90   |      | 0.20     | ug/L  | 05/31/2024    | SC               |
| 1,1-Dichloroethene                                           | ND     |      | 0.50     | ug/L  | 05/31/2024    | SC               |
| trans-1,2-Dichloroethene                                     | ND     |      | 1.0      | ug/L  | 05/31/2024    | SC               |
| cis-1,2-Dichloroethene                                       | ND     |      | 1.0      | ug/L  | 05/31/2024    | SC               |
| Trichloroethene (SIM)                                        | ND     |      | 0.40     | ug/L  | 05/31/2024    | SC               |
| Tetrachloroethene (SIM)                                      | ND     |      | 1.0      | ug/L  | 05/31/2024    | SC               |
| Surrogate: Dibromofluoromethane                              | 114%   |      | 49.6-175 |       | 05/31/2024    | SC               |
| Surrogate: 1,2-Dichloroethane-d4                             | 109%   |      | 31.7-194 |       | 05/31/2024    | SC               |
| Surrogate: Toluene-d8                                        | 96.4%  |      | 52.9-135 |       | 05/31/2024    | SC               |
| Surrogate: 4-Bromofluorobenzene                              | 90.4%  |      | 50.8-121 |       | 05/31/2024    | SC               |



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**City/State:** Olympia, WA  
**Work Order:** L24E093  
**Reported:** 06/03/2024 13:39

## Sample Results (Continued)

**Client Sample ID:** MW-11

**Lab ID:** L24E093-02 (Water)

| Analyte                                                      | Result | Qual | RL       | Units | Date Analyzed | Analyst Initials |
|--------------------------------------------------------------|--------|------|----------|-------|---------------|------------------|
| <b><u>Volatile Organic Compounds by EPA Method 8260D</u></b> |        |      |          |       |               |                  |
| Vinyl Chloride (SIM)                                         | ND     |      | 0.20     | ug/L  | 05/31/2024    | SC               |
| 1,1-Dichloroethene                                           | ND     |      | 0.50     | ug/L  | 05/31/2024    | SC               |
| trans-1,2-Dichloroethene                                     | ND     |      | 1.0      | ug/L  | 05/31/2024    | SC               |
| cis-1,2-Dichloroethene                                       | ND     |      | 1.0      | ug/L  | 05/31/2024    | SC               |
| Trichloroethene (SIM)                                        | ND     |      | 0.40     | ug/L  | 05/31/2024    | SC               |
| Tetrachloroethene (SIM)                                      | ND     |      | 1.0      | ug/L  | 05/31/2024    | SC               |
| Surrogate: Dibromofluoromethane                              | 112%   |      | 49.6-175 |       | 05/31/2024    | SC               |
| Surrogate: 1,2-Dichloroethane-d4                             | 116%   |      | 31.7-194 |       | 05/31/2024    | SC               |
| Surrogate: Toluene-d8                                        | 93.9%  |      | 52.9-135 |       | 05/31/2024    | SC               |
| Surrogate: 4-Bromofluorobenzene                              | 89.2%  |      | 50.8-121 |       | 05/31/2024    | SC               |



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**City/State:** Olympia, WA  
**Work Order:** L24E093  
**Reported:** 06/03/2024 13:39

## Sample Results (Continued)

**Client Sample ID:** MW-14

**Lab ID:** L24E093-03 (Water)

| Analyte                                                      | Result | Qual | RL       | Units | Date Analyzed | Analyst Initials |
|--------------------------------------------------------------|--------|------|----------|-------|---------------|------------------|
| <b><u>Volatile Organic Compounds by EPA Method 8260D</u></b> |        |      |          |       |               |                  |
| Vinyl Chloride (SIM)                                         | 0.60   |      | 0.20     | ug/L  | 05/31/2024    | SC               |
| 1,1-Dichloroethene                                           | ND     |      | 0.50     | ug/L  | 05/31/2024    | SC               |
| trans-1,2-Dichloroethene                                     | ND     |      | 1.0      | ug/L  | 05/31/2024    | SC               |
| cis-1,2-Dichloroethene                                       | 1.8    |      | 1.0      | ug/L  | 05/31/2024    | SC               |
| Trichloroethene (SIM)                                        | ND     |      | 0.40     | ug/L  | 05/31/2024    | SC               |
| Tetrachloroethene (SIM)                                      | ND     |      | 1.0      | ug/L  | 05/31/2024    | SC               |
| Surrogate: Dibromofluoromethane                              | 108%   |      | 49.6-175 |       | 05/31/2024    | SC               |
| Surrogate: 1,2-Dichloroethane-d4                             | 110%   |      | 31.7-194 |       | 05/31/2024    | SC               |
| Surrogate: Toluene-d8                                        | 98.8%  |      | 52.9-135 |       | 05/31/2024    | SC               |
| Surrogate: 4-Bromofluorobenzene                              | 88.0%  |      | 50.8-121 |       | 05/31/2024    | SC               |



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**City/State:** Olympia, WA  
**Work Order:** L24E093  
**Reported:** 06/03/2024 13:39

## Quality Control

### Volatile Organic Compounds by EPA Method 8260D

| Analyte                          | Result | Qual | RL   | Units | Spike Level                                          | Source Result | %REC | %REC Limits | RPD  | RPD Limit |
|----------------------------------|--------|------|------|-------|------------------------------------------------------|---------------|------|-------------|------|-----------|
| <b>Batch: BYE0128 - VOA</b>      |        |      |      |       |                                                      |               |      |             |      |           |
| <b>Blank (BYE0128-BLK1)</b>      |        |      |      |       | Prepared & Analyzed: 5/31/2024                       |               |      |             |      |           |
| Vinyl Chloride (SIM)             | ND     |      | 0.20 | ug/L  |                                                      |               |      |             |      |           |
| 1,1-Dichloroethene               | ND     |      | 0.50 | ug/L  |                                                      |               |      |             |      |           |
| trans-1,2-Dichloroethene         | ND     |      | 1.0  | ug/L  |                                                      |               |      |             |      |           |
| cis-1,2-Dichloroethene           | ND     |      | 1.0  | ug/L  |                                                      |               |      |             |      |           |
| Trichloroethene (SIM)            | ND     |      | 0.40 | ug/L  |                                                      |               |      |             |      |           |
| Tetrachloroethene (SIM)          | ND     |      | 1.0  | ug/L  |                                                      |               |      |             |      |           |
| Surrogate: Dibromofluoromethane  |        |      | 22.7 | ug/L  | 20.0                                                 |               | 113  | 49.6-175    |      |           |
| Surrogate: 1,2-Dichloroethane-d4 |        |      | 25.4 | ug/L  | 20.0                                                 |               | 127  | 31.7-194    |      |           |
| Surrogate: Toluene-d8            |        |      | 22.3 | ug/L  | 20.0                                                 |               | 112  | 52.9-135    |      |           |
| Surrogate: 4-Bromofluorobenzene  |        |      | 18.0 | ug/L  | 20.0                                                 |               | 90.0 | 50.8-121    |      |           |
| <b>LCS (BYE0128-BS1)</b>         |        |      |      |       | Prepared & Analyzed: 5/31/2024                       |               |      |             |      |           |
| Vinyl Chloride (SIM)             | 5.02   |      | 0.20 | ug/L  | 5.00                                                 |               | 100  | 10-182      |      |           |
| 1,1-Dichloroethene               | 5.09   |      | 0.50 | ug/L  | 5.00                                                 |               | 102  | 42.4-208    |      |           |
| trans-1,2-Dichloroethene         | 4.09   |      | 1.0  | ug/L  | 5.00                                                 |               | 81.7 | 37.7-200    |      |           |
| cis-1,2-Dichloroethene           | 5.00   |      | 1.0  | ug/L  | 5.00                                                 |               | 100  | 53.2-160    |      |           |
| Trichloroethene (SIM)            | 4.42   |      | 0.40 | ug/L  | 5.00                                                 |               | 88.4 | 52-128      |      |           |
| Tetrachloroethene (SIM)          | 4.34   |      | 1.0  | ug/L  | 5.00                                                 |               | 86.8 | 46.6-142    |      |           |
| Surrogate: Dibromofluoromethane  |        |      | 20.5 | ug/L  | 20.0                                                 |               | 103  | 49.6-175    |      |           |
| Surrogate: 1,2-Dichloroethane-d4 |        |      | 20.7 | ug/L  | 20.0                                                 |               | 103  | 31.7-194    |      |           |
| Surrogate: Toluene-d8            |        |      | 20.1 | ug/L  | 20.0                                                 |               | 101  | 52.9-135    |      |           |
| Surrogate: 4-Bromofluorobenzene  |        |      | 22.2 | ug/L  | 20.0                                                 |               | 111  | 50.8-121    |      |           |
| <b>Duplicate (BYE0128-DUP1)</b>  |        |      |      |       | Parent: L24E093-03<br>Prepared & Analyzed: 5/31/2024 |               |      |             |      |           |
| Vinyl Chloride (SIM)             | 0.587  |      | 0.20 | ug/L  |                                                      | 0.605         |      |             | 3.02 | 35        |
| 1,1-Dichloroethene               | ND     |      | 0.50 | ug/L  |                                                      | ND            |      |             |      | 35        |
| trans-1,2-Dichloroethene         | ND     |      | 1.0  | ug/L  |                                                      | ND            |      |             |      | 35        |
| cis-1,2-Dichloroethene           | 1.62   |      | 1.0  | ug/L  |                                                      | 1.85          |      |             | 13.0 | 35        |
| Trichloroethene (SIM)            | ND     |      | 0.40 | ug/L  |                                                      | 0.0960        |      |             |      | 35        |
| Tetrachloroethene (SIM)          | ND     |      | 1.0  | ug/L  |                                                      | 0.0590        |      |             |      | 35        |
| Surrogate: Dibromofluoromethane  |        |      | 23.2 | ug/L  | 20.0                                                 |               | 116  | 49.6-175    |      |           |
| Surrogate: 1,2-Dichloroethane-d4 |        |      | 22.9 | ug/L  | 20.0                                                 |               | 114  | 31.7-194    |      |           |
| Surrogate: Toluene-d8            |        |      | 18.7 | ug/L  | 20.0                                                 |               | 93.6 | 52.9-135    |      |           |
| Surrogate: 4-Bromofluorobenzene  |        |      | 17.2 | ug/L  | 20.0                                                 |               | 85.8 | 50.8-121    |      |           |



# Libby Environmental, Inc.

AEG an Atlas Geosciences NW Company  
2633 Parkmont Lane SW, Suite A  
Olympia, WA 98502

**Project:** Former Olympia Dry Cleaners  
**Project Number:** 19-222  
**Project Manager:** Scott Rose

**City/State:** Olympia, WA  
**Work Order:** L24E093  
**Reported:** 06/03/2024 13:39

## Quality Control (Continued)

### Volatile Organic Compounds by EPA Method 8260D (Continued)

| Analyte                                | Result | Qual                      | RL   | Units | Spike Level                    | Source Result | %REC | %REC Limits | RPD   | RPD Limit |
|----------------------------------------|--------|---------------------------|------|-------|--------------------------------|---------------|------|-------------|-------|-----------|
| <b>Duplicate (BYE0128-DUP2)</b>        |        | <b>Parent: L24E097-09</b> |      |       | Prepared & Analyzed: 5/31/2024 |               |      |             |       |           |
| Vinyl Chloride (SIM)                   | ND     |                           | 0.20 | ug/L  |                                | ND            |      |             |       | 35        |
| 1,1-Dichloroethene                     | ND     |                           | 0.50 | ug/L  |                                | ND            |      |             |       | 35        |
| trans-1,2-Dichloroethene               | ND     |                           | 1.0  | ug/L  |                                | ND            |      |             |       | 35        |
| cis-1,2-Dichloroethene                 | ND     |                           | 1.0  | ug/L  |                                | ND            |      |             |       | 35        |
| Trichloroethene (SIM)                  | ND     |                           | 0.40 | ug/L  |                                | ND            |      |             |       | 35        |
| Tetrachloroethene (SIM)                | ND     |                           | 1.0  | ug/L  |                                | ND            |      |             |       | 35        |
| Surrogate: Dibromofluoromethane        |        |                           | 21.1 | ug/L  | 20.0                           |               | 105  | 49.6-175    |       |           |
| Surrogate: 1,2-Dichloroethane-d4       |        |                           | 17.9 | ug/L  | 20.0                           |               | 89.6 | 31.7-194    |       |           |
| Surrogate: Toluene-d8                  |        |                           | 20.5 | ug/L  | 20.0                           |               | 103  | 52.9-135    |       |           |
| Surrogate: 4-Bromofluorobenzene        |        |                           | 16.3 | ug/L  | 20.0                           |               | 81.6 | 50.8-121    |       |           |
| <b>Matrix Spike (BYE0128-MS1)</b>      |        | <b>Parent: L24E093-03</b> |      |       | Prepared & Analyzed: 5/31/2024 |               |      |             |       |           |
| Vinyl Chloride (SIM)                   | 5.27   |                           | 0.20 | ug/L  | 5.00                           | 0.605         | 93.3 | 12.9-183    |       |           |
| 1,1-Dichloroethene                     | 5.10   |                           | 0.50 | ug/L  | 5.00                           | ND            | 102  | 39.1-203    |       |           |
| trans-1,2-Dichloroethene               | 3.76   |                           | 1.0  | ug/L  | 5.00                           | ND            | 75.2 | 40.5-190    |       |           |
| cis-1,2-Dichloroethene                 | 6.61   |                           | 1.0  | ug/L  | 5.00                           | 1.85          | 95.2 | 28.9-177    |       |           |
| Trichloroethene (SIM)                  | 4.31   |                           | 0.40 | ug/L  | 5.00                           | 0.0960        | 84.3 | 58.3-130    |       |           |
| Tetrachloroethene (SIM)                | 4.06   |                           | 1.0  | ug/L  | 5.00                           | 0.0590        | 80.0 | 32-159      |       |           |
| Surrogate: Dibromofluoromethane        |        |                           | 22.7 | ug/L  | 20.0                           |               | 114  | 49.6-175    |       |           |
| Surrogate: 1,2-Dichloroethane-d4       |        |                           | 21.9 | ug/L  | 20.0                           |               | 110  | 31.7-194    |       |           |
| Surrogate: Toluene-d8                  |        |                           | 20.1 | ug/L  | 20.0                           |               | 101  | 52.9-135    |       |           |
| Surrogate: 4-Bromofluorobenzene        |        |                           | 21.6 | ug/L  | 20.0                           |               | 108  | 50.8-121    |       |           |
| <b>Matrix Spike Dup (BYE0128-MSD1)</b> |        | <b>Parent: L24E093-03</b> |      |       | Prepared & Analyzed: 5/31/2024 |               |      |             |       |           |
| Vinyl Chloride (SIM)                   | 5.12   |                           | 0.20 | ug/L  | 5.00                           | 0.605         | 90.3 | 12.9-183    | 2.91  | 35        |
| 1,1-Dichloroethene                     | 5.28   |                           | 0.50 | ug/L  | 5.00                           | ND            | 106  | 39.1-203    | 3.37  | 35        |
| trans-1,2-Dichloroethene               | 4.90   |                           | 1.0  | ug/L  | 5.00                           | ND            | 98.1 | 40.5-190    | 26.4  | 35        |
| cis-1,2-Dichloroethene                 | 6.58   |                           | 1.0  | ug/L  | 5.00                           | 1.85          | 94.6 | 28.9-177    | 0.394 | 35        |
| Trichloroethene (SIM)                  | 4.33   |                           | 0.40 | ug/L  | 5.00                           | 0.0960        | 84.7 | 58.3-130    | 0.463 | 35        |
| Tetrachloroethene (SIM)                | 4.33   |                           | 1.0  | ug/L  | 5.00                           | 0.0590        | 85.4 | 32-159      | 6.44  | 35        |
| Surrogate: Dibromofluoromethane        |        |                           | 21.4 | ug/L  | 20.0                           |               | 107  | 49.6-175    |       |           |
| Surrogate: 1,2-Dichloroethane-d4       |        |                           | 20.4 | ug/L  | 20.0                           |               | 102  | 31.7-194    |       |           |
| Surrogate: Toluene-d8                  |        |                           | 19.5 | ug/L  | 20.0                           |               | 97.4 | 52.9-135    |       |           |
| Surrogate: 4-Bromofluorobenzene        |        |                           | 21.4 | ug/L  | 20.0                           |               | 107  | 50.8-121    |       |           |

# Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

Former Olympia Dry Cleaners Project

AEG an Atlas Geosciences NW Company

Libby Work Order # L24E093

Date Received 5/30/2024

Time Received 11:45 AM

Received By KLI

## Sample Receipt Checklist

### Chain of Custody

- |                                         |                                                    |                                    |                                  |
|-----------------------------------------|----------------------------------------------------|------------------------------------|----------------------------------|
| 1. Is the Chain of Custody is complete? | <input checked="" type="checkbox"/> Yes            | <input type="checkbox"/> No        |                                  |
| 2. How was the sample delivered?        | <input checked="" type="checkbox"/> Hand Delivered | <input type="checkbox"/> Picked Up | <input type="checkbox"/> Shipped |

### Log In

- |                                                               |                                         |                                        |                              |
|---------------------------------------------------------------|-----------------------------------------|----------------------------------------|------------------------------|
| 3. Cooler or Shipping Container is present.                   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | <input type="checkbox"/> N/A |
| 4. Cooler or Shipping Container is in good condition.         | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | <input type="checkbox"/> N/A |
| 5. Cooler or Shipping Container has Custody Seals present.    | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A |
| 6. Was an attempt made to cool the samples?                   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | <input type="checkbox"/> N/A |
| 7. Temperature of cooler (0°C to 8°C recommended)             | <u>4.2 °C</u>                           |                                        |                              |
| 8. Temperature of sample(s) (0°C to 8°C recommended)          | <u>2.0 °C</u>                           |                                        |                              |
| 9. Did all containers arrive in good condition (unbroken)?    | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                              |
| 10. Is it clear what analyses were requested?                 | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                              |
| 11. Did container labels match Chain of Custody?              | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                              |
| 12. Are matrices correctly identified on Chain of Custody?    | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                              |
| 13. Are correct containers used for the analysis indicated?   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                              |
| 14. Is there sufficient sample volume for indicated analysis? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                              |
| 15. Were all containers properly preserved per each analysis? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                              |
| 16. Were VOA vials collected correctly (no headspace)?        | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            | <input type="checkbox"/> N/A |
| 17. Were all holding times able to be met?                    | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |                              |

### Discrepancies/ Notes

- |                                               |                              |                             |                                         |
|-----------------------------------------------|------------------------------|-----------------------------|-----------------------------------------|
| 18. Was client notified of all discrepancies? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
|-----------------------------------------------|------------------------------|-----------------------------|-----------------------------------------|

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: \_\_\_\_\_

Regarding: \_\_\_\_\_

19. Comments. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_