



2018 Property Line Benzene Monitoring Results

| Sample Deployment Date | | 10-Jan-18 | 24-Jan-18 | 7-Feb-18 | 21-Feb-18 | 7-Mar-18 | 21-Mar-18 | 4-Apr-18 | 18-Apr-18 | 2-May-18 | 16-May-18 | 30-May-18 | 13-Jun-18 | 27-Jun-18 |
|------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Sample Retrieval Date | | 24-Jan-18 | 7-Feb-18 | 21-Feb-18 | 7-Mar-18 | 21-Mar-18 | 4-Apr-18 | 18-Apr-18 | 2-May-18 | 16-May-18 | 30-May-18 | 13-Jun-18 | 27-Jun-18 | 11-Jul-18 |
| UTM Coordinates | Location | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 |
| 382166mE, 4752034mN | Station #1 | 7.68 | 8.25 | 7.96 | 4.53 | 4.78 | 1.40 | 3.85 | 1.94 | 2.52 | 5.59 | 2.39 | 3.62 | 4.72 |
| 382511mE, 4752034mN | Station #2 | 5.65 | 3.97 | 5.00 | 2.65 | 2.50 | 1.03 | 2.94 | 1.50 | 2.00 | 3.44 | 1.77 | 2.51 | 2.24 |
| 383172mE, 4752033mN | Station #3 | 3.04 | 1.71 | 3.00 | 2.11 | 1.51 | 1.12 | 1.75 | 1.36 | 2.02 | 2.30 | 1.98 | 1.80 | 1.26 |
| 383332mE, 4751409mN | Station #4 | 2.19 | 1.60 | 2.05 | 1.39 | 1.47 | 1.11 | 1.36 | 1.23 | 1.75 | 1.71 | 1.90 | 2.13 | 0.96 |
| 382517mE, 4751245mN | Station #5 | 3.00 | 2.82 | 2.97 | 1.79 | 2.79 | 1.68 | 2.80 | 2.27 | 1.70 | 1.92 | 1.70 | 1.97 | 1.39 |
| 382125mE, 4750795mN | Station #6 | 2.17 | 2.55 | 2.58 | 2.37 | 3.38 | 2.56 | 2.18 | 2.14 | 1.83 | 2.23 | 2.05 | 2.65 | 1.76 |
| 381748mE, 4750810mN | Station #7 | 3.17 | 2.96 | 2.89 | 2.93 | 3.87 | 2.61 | 2.97 | 2.82 | 2.39 | 2.55 | 2.95 | 3.17 | 2.21 |
| 381455mE, 4750820mN | Station #8 | 5.54 | 7.28 | 9.60 | 20.80 | 13.50 | 14.30 | 16.10 | 9.64 | 7.94 | 6.60 | 11.20 | 15.10 | 8.83 |
| 381052mE, 4750852mN | Station #9 | 1.14 | 2.22 | 2.85 | 6.47 | 2.81 | 2.32 | 2.65 | 2.25 | 2.51 | 2.05 | 3.13 | 2.67 | 1.57 |
| 381112mE, 4751494mN | Station #10 | 4.13 | 4.28 | 5.66 | 3.73 | 4.34 | 2.67 | 2.72 | 5.00 | 1.51 | 1.77 | 4.91 | 2.61 | 3.56 |
| 381438mE, 4751966mN | Station #11 | 21.20 | 11.10 | 11.90 | 4.96 | 2.81 | 5.55 | 9.35 | 8.31 | 3.62 | 6.45 | 9.11 | 6.78 | 6.43 |
| 381773mE, 4752076mN | Station #12 | 53.70 | 24.80 | 34.90 | 14.20 | 3.08 | 5.37 | 9.14 | 9.53 | 14.40 | 11.90 | 5.49 | 10.60 | 20.60 |

Field QA/QC Data

| Field Blank #1 | Location | Station #1 | Station #2 | Station #3 | Station #4 | Station #5 | Station #6 | Station #7 | Station #8 | Station #9 | Station #10 | Station #11 | Station #12 | Station #1 |
|-----------------|---------------|------------|------------|------------|-------------|-------------|-------------|------------|------------|------------|-------------|-------------|-------------|------------|
| | Value (ug/m3) | <0.31 | <0.32 | <0.32 | <0.31 | <0.31 | <0.31 | <0.31 | <0.31 | <0.31 | <0.30 | See Note 2 | <0.30 | <0.30 |
| Field Duplicate | Location | Station #1 | Station #2 | Station #3 | Station #4 | Station #5 | Station #6 | Station #7 | Station #8 | Station #9 | Station #10 | Station #11 | Station #12 | Station #1 |
| | Value (ug/m3) | 7.67 | 3.76 | 3.02 | 1.39 | 2.72 | 2.42 | 2.94 | 9.43 | 2.52 | 1.74 | See Note 2 | 10.40 | 4.66 |
| | RPD (%) | 0.13% | 5.29% | 0.67% | | 2.51% | 5.47% | 1.01% | 2.18% | 0.40% | 1.69% | See Note 2 | 1.89% | 1.27% |
| Field Blank #2 | Location | Station #7 | Station #8 | Station #9 | Station #10 | Station #11 | Station #12 | Station #1 | Station #2 | Station #3 | Station #4 | Station #5 | Station #6 | Station #7 |
| | Value (ug/m3) | <0.31 | <0.32 | <0.32 | <0.31 | <0.31 | <0.31 | <0.31 | <0.31 | <0.31 | <0.30 | <0.30 | <0.30 | <0.30 |

Notes:

- 1) RPD is Relative Percent Difference (Difference / Mean expressed as a percent). Used as the default precision evaluation.
- 2) Sample Period May 30-June 11; Station#11: No analytical value was reported for the Station #11 routine sample nor the blank sample at Station #11, due to laboratory error. The samples were compromised during an instrument error, with no option to rerun. The duplicate and routine values have been interchanged for reporting purposes. The laboratory has also indicated the reported values at Station #10, Station#11 and Station#12 may be biased low.
- 3) Sample Period July 11-25: Station #8 was impacted by a >50% off-site wind profile for this period.
- 4) Sample Period Sept. 5 - 19: ALS was unable to report results for Stations 2 and 3 due to a power failure at the laboratory while analyzing the samples.
- 5) Sample Period Nov. 14-28: Sample tube at STN-7 was missing from shroud at end of sampling period (November 28).

Ontario Ministry of the Environment, Conservation and Parks (MECP)
 Petroleum Industry Refining Standard (PRIS)
 Shell Canada Products Sarnia Manufacturing Centre
 Sarnia, Ontario Canada



2018 Property Line Benzene Monitoring Results

| Sample Deployment Date | | 11-Jul-18 | 25-Jul-18 | 8-Aug-18 | 22-Aug-18 | 5-Sep-18 | 19-Sep-18 | 3-Oct-18 | 17-Oct-18 | 31-Oct-18 | 14-Nov-18 | 28-Nov-18 | 12-Dec-18 |
|------------------------|-------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Sample Retrieval Date | | 25-Jul-18 | 8-Aug-18 | 22-Aug-18 | 5-Sep-18 | 19-Sep-18 | 3-Oct-18 | 17-Oct-18 | 31-Oct-18 | 14-Nov-18 | 28-Nov-18 | 12-Dec-18 | 27-Dec-18 |
| UTM Coordinates | Location | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 | ug/m3 |
| 382166mE, 4752034mN | Station #1 | 2.34 | 1.36 | 1.30 | 2.70 | 1.25 | 1.07 | 1.19 | 1.49 | 0.96 | 0.91 | 1.29 | 1.50 |
| 382511mE, 4752034mN | Station #2 | 1.73 | 1.03 | 1.09 | 1.76 | See Note 4 | 0.99 | 1.01 | 1.32 | 0.94 | 0.86 | 1.12 | 1.74 |
| 383172mE, 4752033mN | Station #3 | 1.22 | 0.85 | 1.03 | 1.26 | See Note 4 | 0.86 | 0.89 | 0.94 | 0.91 | 0.79 | 0.93 | 1.31 |
| 383332mE, 4751409mN | Station #4 | 1.21 | 0.91 | 1.17 | 1.00 | 1.12 | 0.86 | 0.91 | 1.19 | 0.93 | 0.79 | 0.99 | 1.44 |
| 382517mE, 4751245mN | Station #5 | 1.78 | 1.31 | 1.72 | 1.76 | 1.37 | 1.26 | 1.20 | 1.53 | 1.80 | 1.24 | 1.75 | 2.56 |
| 382125mE, 4750795mN | Station #6 | 1.51 | 1.13 | 1.40 | 1.25 | 1.92 | 1.62 | 1.44 | 1.94 | 1.81 | 1.89 | 2.38 | 2.87 |
| 381748mE, 4750810mN | Station #7 | 1.23 | 1.13 | 1.42 | 0.91 | 1.63 | 1.59 | 1.23 | 2.34 | 1.95 | See Note 5 | 2.28 | 2.29 |
| 381455mE, 4750820mN | Station #8 | 10.00 | 3.77 | 9.47 | 3.74 | 31.00 | 7.98 | 2.55 | 6.81 | 7.84 | 5.49 | 2.89 | 6.18 |
| 381052mE, 4750852mN | Station #9 | 1.64 | 1.03 | 2.03 | 1.34 | 4.69 | 2.38 | 1.05 | 1.90 | 1.39 | 1.04 | 0.98 | 1.86 |
| 381112mE, 4751494mN | Station #10 | 2.43 | 1.21 | 1.51 | 1.77 | 1.21 | 1.56 | 1.23 | 0.91 | 1.29 | 1.47 | 1.26 | 2.07 |
| 381438mE, 4751966mN | Station #11 | 3.15 | 1.17 | 1.08 | 5.62 | 0.91 | 1.08 | 1.30 | 0.92 | 0.91 | 0.94 | 0.91 | 1.53 |
| 381773mE, 4752076mN | Station #12 | 3.54 | 1.50 | 1.13 | 7.19 | 1.05 | 1.22 | 1.55 | 1.27 | 1.00 | 0.90 | 1.00 | 1.50 |

Field QA/QC Data

| | | | | | | | | | | | | | |
|-----------------|---------------|------------|------------|-------------|-------------|-------------|------------|------------|------------|-------------|-------------|-------------|------------|
| Field Blank #1 | Location | Station #2 | Station #3 | Station #4 | Station #5 | Station #6 | Station #7 | Station #8 | Station #9 | Station #10 | Station #11 | Station #12 | Station #1 |
| | Value (ug/m3) | <0.30 | <0.30 | <0.30 | <0.30 | <0.30 | <0.31 | <0.31 | <0.31 | <0.31 | <0.31 | <0.31 | <0.29 |
| Field Duplicate | Location | Station #2 | Station #3 | Station #4 | Station #5 | Station #6 | Station #7 | Station #8 | Station #9 | Station #10 | Station #11 | Station #12 | Station #1 |
| | Value (ug/m3) | 1.74 | 0.91 | 0.98 | 1.61 | 1.67 | 1.48 | 2.76 | 1.98 | 1.23 | 0.90 | 1.04 | 1.56 |
| | RPD (%) | 0.58% | 7.06% | 16.24% | 8.52% | 13.02% | 6.92% | 8.24% | 4.21% | 4.65% | 4.26% | 4.00% | 10.34% |
| Field Blank #2 | Location | Station #8 | Station #9 | Station #10 | Station #11 | Station #12 | Station #1 | Station #2 | Station #3 | Station #4 | Station #5 | Station #6 | Station #7 |
| | Value (ug/m3) | <0.30 | <0.30 | <0.30 | <0.30 | <0.30 | <0.31 | <0.33 | <0.31 | <0.31 | <0.31 | <0.31 | <0.29 |