

Data Path : Z:\VOASRV\HPCHEM1\MSVOA W\DATA\VW091719\  
 Data File : VW013081.D  
 Acq On : 17 Sep 2019 11:19  
 Operator : SY/VA  
 Sample : VW0917SBSD01  
 Misc : 5.00G/5ML/MSVOA W/SOIL  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 VW0917SBSD01

Manual Integrations  
 APPROVED

MMDadoda  
 9/19/2019 1:27:46 AM

Quant Time: Sep 18 06:27:28 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W091419S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Sep 13 17:26:01 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.95  | 168  | 354915   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.84  | 114  | 520495   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.63 | 117  | 451841   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.56 | 152  | 226385   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.31   | 65  | 157971   | 48.19 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 96.38%  |      |
| 35) Dibromofluoromethane  | 7.88   | 113 | 138268   | 48.96 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 97.92%  |      |
| 50) Toluene-d8            | 10.32  | 98  | 560172   | 50.69 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 101.38% |      |
| 62) 4-Bromofluorobenzene  | 12.62  | 95  | 197294   | 49.65 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 99.30%  |      |

## Target Compounds

|                               |      |     |        |         |        | Qvalue |
|-------------------------------|------|-----|--------|---------|--------|--------|
| 2) Dichlorodifluoromethane    | 2.01 | 85  | 30625  | 19.843  | ug/l   | 100    |
| 3) Chloromethane              | 2.21 | 50  | 42673  | 22.296  | ug/l   | 98     |
| 4) Vinyl Chloride             | 2.35 | 62  | 53943  | 21.234  | ug/l   | 99     |
| 5) Bromomethane               | 2.77 | 94  | 29032  | 18.714  | ug/l   | 99     |
| 6) Chloroethane               | 2.92 | 64  | 32099  | 20.602  | ug/l   | 95     |
| 7) Trichlorofluoromethane     | 3.24 | 101 | 32149  | 18.097  | ug/l   | 89     |
| 8) Diethyl Ether              | 3.68 | 74  | 25958  | 18.714  | ug/l   | 94     |
| 9) 1,1,2-Trichlorotrifluoroet | 4.06 | 101 | 51333  | 19.052  | ug/l   | 99     |
| 10) Methyl Iodide             | 4.26 | 142 | 67656  | 20.064  | ug/l   | 98     |
| 11) Tert butyl alcohol        | 5.18 | 59  | 23659  | 93.516  | ug/l # | 93     |
| 12) 1,1-Dichloroethene        | 4.04 | 96  | 48069  | 19.621  | ug/l   | 96     |
| 13) Acrolein                  | 3.89 | 56  | 22884  | 90.222  | ug/l   | 97     |
| 14) Allyl chloride            | 4.67 | 41  | 91971  | 19.775  | ug/l   | 96     |
| 15) Acrylonitrile             | 5.37 | 53  | 68863  | 97.200  | ug/l   | 98     |
| 16) Acetone                   | 4.12 | 43  | 63973  | 76.366  | ug/l   | 96     |
| 17) Carbon Disulfide          | 4.38 | 76  | 97246  | 19.919  | ug/l   | 99     |
| 18) Methyl Acetate            | 4.67 | 43  | 36549  | 19.571  | ug/l   | 99     |
| 19) Methyl tert-butyl Ether   | 5.42 | 73  | 95398  | 19.727  | ug/l   | 98     |
| 20) Methylene Chloride        | 4.91 | 84  | 56157  | 17.873  | ug/l   | 93     |
| 21) trans-1,2-Dichloroethene  | 5.42 | 96  | 52621  | 20.055  | ug/l   | 97     |
| 22) Diisopropyl ether         | 6.31 | 45  | 199393 | 20.637  | ug/l   | 99     |
| 23) Vinyl Acetate             | 6.25 | 43  | 573998 | 99.190  | ug/l   | 99     |
| 24) 1,1-Dichloroethane        | 6.21 | 63  | 109140 | 19.592  | ug/l   | 98     |
| 25) 2-Butanone                | 7.17 | 43  | 101592 | 97.470  | ug/l   | 99     |
| 26) 2,2-Dichloropropane       | 7.17 | 77  | 74794  | 18.417  | ug/l   | 98     |
| 27) cis-1,2-Dichloroethene    | 7.17 | 96  | 64239  | 20.450  | ug/l   | 99     |
| 28) Bromochloromethane        | 7.51 | 49  | 45397  | 19.362  | ug/l # | 98     |
| 29) Tetrahydrofuran           | 7.52 | 42  | 59927  | 100.908 | ug/l   | 99     |
| 30) Chloroform                | 7.67 | 83  | 111711 | 19.736  | ug/l   | 94     |
| 31) Cyclohexane               | 7.95 | 56  | 98146  | 21.005  | ug/l   | 96     |
| 32) 1,1,1-Trichloroethane     | 7.87 | 97  | 88041  | 18.888  | ug/l   | 99     |
| 36) 1,1-Dichloropropene       | 8.08 | 75  | 83358  | 20.042  | ug/l   | 98     |
| 37) Ethyl Acetate             | 7.25 | 43  | 42602  | 19.297  | ug/l   | 99     |
| 38) Carbon Tetrachloride      | 8.06 | 117 | 79445  | 18.639  | ug/l   | 90     |

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 Operator : SY/VA  
 Sample : VW0917SBSD01  
 Misc : 5.00G/5ML/MSVOA W/SOIL  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 VW0917SBSD01

Manual Integrations  
 APPROVED

MMDadoda  
 9/19/2019 1:27:46 AM

Quant Time: Sep 18 06:27:28 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W091419S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Sep 13 17:26:01 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 9.34  | 83   | 95859    | 21.033  | ug/l   | 99       |
| 40) Benzene                    | 8.32  | 78   | 231519   | 19.939  | ug/l   | 98       |
| 41) Methacrylonitrile          | 7.49  | 41   | 25096    | 17.262  | ug/l   | 92       |
| 42) 1,2-Dichloroethane         | 8.40  | 62   | 72976    | 18.749  | ug/l   | 97       |
| 43) Isopropyl Acetate          | 8.42  | 43   | 82937    | 19.566  | ug/l   | 99       |
| 44) Trichloroethene            | 9.09  | 130  | 61392    | 19.303  | ug/l   | 96       |
| 45) 1,2-Dichloropropane        | 9.37  | 63   | 61423    | 19.911  | ug/l   | 99       |
| 46) Dibromomethane             | 9.45  | 93   | 29388    | 19.884  | ug/l   | 98       |
| 47) Bromodichloromethane       | 9.64  | 83   | 79084    | 19.076  | ug/l   | 99       |
| 48) Methyl methacrylate        | 9.43  | 41   | 38273    | 19.239  | ug/l   | 97       |
| 49) 1,4-Dioxane                | 9.46  | 88   | 8691     | 350.935 | ug/l # | 72       |
| 51) 4-Methyl-2-Pentanone       | 10.21 | 43   | 212490   | 97.099  | ug/l   | 100      |
| 52) Toluene                    | 10.38 | 92   | 147948   | 20.052  | ug/l   | 98       |
| 53) t-1,3-Dichloropropene      | 10.60 | 75   | 78177    | 18.750  | ug/l   | 99       |
| 54) cis-1,3-Dichloropropene    | 10.07 | 75   | 92014    | 19.288  | ug/l   | 98       |
| 55) 1,1,2-Trichloroethane      | 10.79 | 97   | 44430    | 19.733  | ug/l   | 96       |
| 56) Ethyl methacrylate         | 10.65 | 69   | 60880    | 20.088  | ug/l   | 98       |
| 57) 1,3-Dichloropropane        | 10.93 | 76   | 78857    | 19.744  | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 9.92  | 63   | 153367   | 94.338  | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.97 | 43   | 146418   | 96.088  | ug/l   | 99       |
| 60) Dibromochloromethane       | 11.13 | 129  | 50783    | 18.656  | ug/l   | 98       |
| 61) 1,2-Dibromoethane          | 11.23 | 107  | 40639    | 19.786  | ug/l   | 98       |
| 64) Tetrachloroethene          | 10.86 | 164  | 52394    | 19.492  | ug/l   | 95       |
| 65) Chlorobenzene              | 11.66 | 112  | 158258   | 19.663  | ug/l   | 97       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.73 | 131  | 56502    | 18.319  | ug/l   | 97       |
| 67) Ethyl Benzene              | 11.73 | 91   | 293284   | 19.731  | ug/l   | 99       |
| 68) m/p-Xylenes                | 11.84 | 106  | 215078   | 39.608  | ug/l   | 98       |
| 69) o-Xylene                   | 12.16 | 106  | 103788   | 20.387  | ug/l   | 97       |
| 70) Styrene                    | 12.18 | 104  | 178266   | 19.685  | ug/l   | 99       |
| 71) Bromoform                  | 12.35 | 173  | 30391    | 18.759  | ug/l # | 100      |
| 73) Isopropylbenzene           | 12.46 | 105  | 293110   | 19.534  | ug/l   | 99       |
| 74) N-amyl acetate             | 12.27 | 43   | 73881    | 19.140  | ug/l   | 99       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.71 | 83   | 51795    | 19.653  | ug/l   | 98       |
| 76) 1,2,3-Trichloropropane     | 12.77 | 75   | 40860m   | 20.606  | ug/l   |          |
| 77) Bromobenzene               | 12.74 | 156  | 66360    | 19.197  | ug/l   | 99       |
| 78) n-propylbenzene            | 12.80 | 91   | 341401   | 19.342  | ug/l   | 100      |
| 79) 2-Chlorotoluene            | 12.89 | 91   | 194708   | 19.189  | ug/l   | 100      |
| 80) 1,3,5-Trimethylbenzene     | 12.94 | 105  | 245798   | 19.362  | ug/l   | 100      |
| 81) trans-1,4-Dichloro-2-buten | 12.51 | 75   | 15683    | 17.941  | ug/l   | 94       |
| 82) 4-Chlorotoluene            | 12.99 | 91   | 204833   | 19.133  | ug/l   | 99       |
| 83) tert-Butylbenzene          | 13.21 | 119  | 219009   | 19.288  | ug/l   | 100      |
| 84) 1,2,4-Trimethylbenzene     | 13.25 | 105  | 242702   | 19.348  | ug/l   | 97       |
| 85) sec-Butylbenzene           | 13.38 | 105  | 299402   | 19.353  | ug/l   | 100      |
| 86) p-Isopropyltoluene         | 13.50 | 119  | 277296   | 19.523  | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 13.50 | 146  | 130504   | 19.071  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 13.58 | 146  | 130445   | 19.398  | ug/l   | 99       |
| 89) n-Butylbenzene             | 13.82 | 91   | 260240   | 19.428  | ug/l   | 99       |
| 90) Hexachloroethane           | 14.09 | 117  | 46291    | 18.187  | ug/l   | 97       |
| 91) 1,2-Dichlorobenzene        | 13.87 | 146  | 115779   | 19.239  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 14.49 | 75   | 8226     | 17.052  | ug/l   | 97       |

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ALS Vial : 5 Sample Multiplier: 1

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MSVOA\_W  
ClientSampleId :  
VW0917SBSD01

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9/19/2019 1:27:46 AM

Quant Time: Sep 18 06:27:28 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W091419S.M  
Quant Title : SW846 8260  
QLast Update : Fri Sep 13 17:26:01 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 15.13 | 180  | 80452    | 18.746 | ug/l  | 98       |
| 94) Hexachlorobutadiene    | 15.24 | 225  | 56978    | 18.754 | ug/l  | 98       |
| 95) Naphthalene            | 15.36 | 128  | 136242   | 18.999 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 15.55 | 180  | 72800    | 19.189 | ug/l  | 99       |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

