ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

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**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 52 | Number of Detected Data | 5 |
| Number of Unique Samples | 5 | Number of Non-Detect Data | 47 |
| | | Percent Non-Detects | 90.38% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.0002 | Minimum Detected | -8.517 |
| Maximum Detected | 0.0006 | Maximum Detected | -7.419 |
| Mean of Detected | 0.000392 | Mean of Detected | -7.916 |
| SD of Detected | 0.0001574 | SD of Detected | 0.435 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 0.63 | Maximum Non-Detect | -0.462 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 52 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.981 | Lilliefors Test Statistic | 0.966 |
| 5% Lilliefors Critical Value | 0.762 | 5% Lilliefors Critical Value | 0.762 |
| **Data appear Normal at 5% Significance Level** | | **Data appear Lognormal at 5% Significance Level** | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0123 | Mean | -6.963 |
| SD | 0.0474 | SD | 1.777 |
| 95% DL/2 (t) UCL | 0.0234 | 95% H-Stat (DL/2) UCL | 0.0186 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -8.04 |
| | | SD in Log Scale | 0.302 |
| | | Mean in Original Scale | 0.00033709 |
| | | SD in Original Scale | 0.00010228 |
| | | 95% Percentile Bootstrap UCL | 0.00036029 |
| | | 95% BCA Bootstrap UCL | 0.0003617 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 2.996 | **Data appear Normal at 5% Significance Level** |
| Theta Star | 0.0001308 | |
| nu star | 29.96 | |
| A-D Test Statistic | 0.212 | |
| 5% A-D Critical Value | 0.68 | |
| K-S Test Statistic | 0.68 | |
| 5% K-S Critical Value | 0.358 | |
| **Data appear Gamma Distributed at 5% Significance Level** | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0.0002 | Mean | 0.000353 |
| Maximum | 0.0006 | SD | 0.00011789 |
| Mean | 0.0003836 | SE of Mean | 0.000058082 |
| Median | 0.0003789 | 95% KM (t) UCL | 0.0004503 |
| SD | 4.8E-05 | 95% KM (z) UCL | 0.00044854 |
| k star | 58.61 | 95% KM (jackknife) UCL | 0.00046632 |
| Theta star | 0 | 95% KM (bootstrap t) UCL | 0.00049456 |
| Nu star | 6096 | 95% KM (BCA) UCL | 0.00047 |
| AppChi2 | 5915 | 95% KM (Percentile Bootstrap) UCL | 0.00046623 |
| 95% Gamma Approximate UCL | 0.0003953 | 95% KM (Chebyshev) UCL | 0.00060617 |
| 95% Adjusted Gamma UCL | 0.0003957 | 97.5% KM (Chebyshev) UCL | 0.00071572 |
| | | 99% KM (Chebyshev) UCL | 0.00093091 |
| | | **Potential UCLs to Use** | |
| | | 95% KM (t) UCL | 0.0004503 |
| | | 95% KM (Percentile Bootstrap) UCL | 0.00046623 |

Note: DL/2 is not a recommended method.

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_50 Acetone

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 88 | Number of Detected Data | 23 |
| Number of Unique Samples | 23 | Number of Non-Detect Data | 65 |
| | | Percent Non-Detects | 73.86% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.011 | Minimum Detected | -4.51 |
| Maximum Detected | 11 | Maximum Detected | 2.398 |
| Mean of Detected | 2.236 | Mean of Detected | -1.292 |
| SD of Detected | 3.531 | SD of Detected | 2.429 |
| Minimum Non-Detect | 0.002 | Minimum Non-Detect | -6.215 |
| Maximum Non-Detect | 13 | Maximum Non-Detect | 2.565 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 88 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.683 | Lilliefors Test Statistic | 0.889 |
| 5% Lilliefors Critical Value | 0.914 | 5% Lilliefors Critical Value | 0.914 |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.817 | Mean | -3.606 |
| SD | 2.217 | SD | 2.55 |
| 95% DL/2 (t) UCL | 1.21 | 95% H-Stat (DL/2) UCL | 3.015 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -6.402 |
| | | SD in Log Scale | 3.919 |
| | | Mean in Original Scale | 0.586 |
| | | SD in Original Scale | 2.032 |
| | | 95% Percentile Bootstrap UCL | 0.96 |
| | | 95% BCA Bootstrap UCL | 1.057 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 0.311 | Data do not follow a Discernable Distribution (0.05) | |
| Theta Star | 7.183 | | |
| nu star | 14.32 | | |
| A-D Test Statistic | 1.459 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.843 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.843 | Mean | 0.61 |
| 5% K-S Critical Value | 0.196 | SD | 2.038 |
| Data not Gamma Distributed at 5% Significance Level | | SE of Mean | 0.225 |
| | | 95% KM (t) UCL | 0.984 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.98 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.977 |
| Minimum | 0.011 | 95% KM (bootstrap t) UCL | 1.132 |
| Maximum | 11 | 95% KM (BCA) UCL | 1.04 |
| Mean | 2.358 | 95% KM (Percentile Bootstrap) UCL | 1.004 |
| Median | 2.071 | 95% KM (Chebyshev) UCL | 1.59 |
| SD | 1.866 | 97.5% KM (Chebyshev) UCL | 2.013 |
| k star | 0.982 | 99% KM (Chebyshev) UCL | 2.846 |
| Theta star | 2.402 | | |
| Nu star | 172.8 | **Potential UCLs to Use** | |
| AppChi2 | 143.4 | 97.5% KM (Chebyshev) UCL | 2.013 |
| 95% Gamma Approximate UCL | 2.842 | | |
| 95% Adjusted Gamma UCL | 2.85 | | |

Note: DL/2 is not a recommended method.

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| User Selected Options | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

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**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 88 | Number of Detected Data | 44 |
| Number of Unique Samples | 30 | Number of Non-Detect Data | 44 |
| | | Percent Non-Detects | 50.00% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.00014 | Minimum Detected | -8.874 |
| Maximum Detected | 0.18 | Maximum Detected | -1.715 |
| Mean of Detected | 0.0077 | Mean of Detected | -7.07 |
| SD of Detected | 0.0297 | SD of Detected | 1.603 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 0.63 | Maximum Non-Detect | -0.462 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 88 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.28 | Lilliefors Test Statistic | 0.797 |
| 5% Lilliefors Critical Value | 0.944 | 5% Lilliefors Critical Value | 0.944 |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0134 | Mean | -6.467 |
| SD | 0.0421 | SD | 1.881 |
| 95% DL/2 (t) UCL | 0.0208 | 95% H-Stat (DL/2) UCL | 0.0574 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -7.405 |
| | | SD in Log Scale | 1.31 |
| | | Mean in Original Scale | 0.00415 |
| | | SD in Original Scale | 0.0212 |
| | | 95% Percentile Bootstrap UCL | 0.00818 |
| | | 95% BCA Bootstrap UCL | 0.0104 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 0.305 | **Data do not follow a Discernable Distribution (0.05)** |
| Theta Star | 0.0253 | |
| nu star | 26.84 | |
| A-D Test Statistic | 7.677 | |
| 5% A-D Critical Value | 0.858 | |
| K-S Test Statistic | 0.858 | |
| 5% K-S Critical Value | 0.145 | |
| Data not Gamma Distributed at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0 | Mean | 0.00433 |
| Maximum | 0.18 | SD | 0.0215 |
| Mean | 0.00797 | SE of Mean | 0.00237 |
| Median | 0.00064 | 95% KM (t) UCL | 0.00828 |
| SD | 0.0229 | 95% KM (z) UCL | 0.00824 |
| k star | 0.164 | 95% KM (jackknife) UCL | 0.00826 |
| Theta star | 0.0487 | 95% KM (bootstrap t) UCL | 0.0333 |
| Nu star | 28.78 | 95% KM (BCA) UCL | 0.00901 |
| AppChi2 | 17.54 | 95% KM (Percentile Bootstrap) UCL | 0.00858 |
| 95% Gamma Approximate UCL | 0.0131 | 95% KM (Chebyshev) UCL | 0.0147 |
| 95% Adjusted Gamma UCL | 0.0132 | 97.5% KM (Chebyshev) UCL | 0.0192 |
| | | 99% KM (Chebyshev) UCL | 0.0279 |
| | | **Potential UCLs to Use** | |
| | | 97.5% KM (Chebyshev) UCL | 0.0192 |

Note: DL/2 is not a recommended method.

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_52 Bromodichloromethane

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 87 | Number of Detected Data | 2 |
| Number of Unique Samples | 2 | Number of Non-Detect Data | 85 |
| | | Percent Non-Detects | 97.70% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.0004 | Minimum Detected | -7.824 |
| Maximum Detected | 0.001 | Maximum Detected | -6.908 |
| Mean of Detected | 0.0007 | Mean of Detected | -7.366 |
| SD of Detected | 0.0004243 | SD of Detected | 0.648 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 87 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 1 | Lilliefors Test Statistic | 1 |
| 5% Lilliefors Critical Value | N/A | 5% Lilliefors Critical Value | N/A |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0205 | Mean | -6.68 |
| SD | 0.0828 | SD | 1.884 |
| 95% DL/2 (t) UCL | 0.0353 | 95% H-Stat (DL/2) UCL | 0.0166 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | N/A |
| | | SD in Log Scale | N/A |
| | | Mean in Original Scale | N/A |
| | | SD in Original Scale | N/A |
| | | 95% Percentile Bootstrap UCL | N/A |
| | | 95% BCA Bootstrap UCL | N/A |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | N/A | Data do not follow a Discernable Distribution (0.05) |
| Theta Star | N/A | |
| nu star | N/A | |
| A-D Test Statistic | 0.359 | |
| 5% A-D Critical Value | N/A | |
| K-S Test Statistic | N/A | |
| 5% K-S Critical Value | N/A | |
| Data not Gamma Distributed at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | N/A | Mean | 0.0004125 |
| Maximum | N/A | SD | 0.000085696 |
| Mean | N/A | SE of Mean | 0.000017493 |
| Median | N/A | 95% KM (t) UCL | 0.00044159 |
| SD | N/A | 95% KM (z) UCL | 0.00044127 |
| k star | N/A | 95% KM (jackknife) UCL | 0.00079789 |
| Theta star | N/A | 95% KM (bootstrap t) UCL | 1.7977E+308 |
| Nu star | N/A | 95% KM (BCA) UCL | 0.001 |
| AppChi2 | N/A | 95% KM (Percentile Bootstrap) UCL | 0.001 |
| 95% Gamma Approximate UCL | N/A | 95% KM (Chebyshev) UCL | 0.00048875 |
| 95% Adjusted Gamma UCL | N/A | 97.5% KM (Chebyshev) UCL | 0.00052174 |
| Note: DL/2 is not a recommended method. | | 99% KM (Chebyshev) UCL | 0.00058655 |
| | | **Potential UCLs to Use** | |
| | | 95% KM (t) UCL | 0.00044159 |
| | | 95% KM (% Bootstrap) UCL | 0.001 |

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_53 Bromomethane

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 86 | Number of Detected Data | 2 |
| Number of Unique Samples | 2 | Number of Non-Detect Data | 84 |
| | | Percent Non-Detects | 97.67% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.0056 | Minimum Detected | -5.185 |
| Maximum Detected | 0.18 | Maximum Detected | -1.715 |
| Mean of Detected | 0.0928 | Mean of Detected | -3.45 |
| SD of Detected | 0.123 | SD of Detected | 2.454 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1.3 | Maximum Non-Detect | 0.262 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 86 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 1 | Lilliefors Test Statistic | 1 |
| 5% Lilliefors Critical Value | N/A | 5% Lilliefors Critical Value | N/A |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0221 | Mean | -6.669 |
| SD | 0.092 | SD | 1.906 |
| 95% DL/2 (t) UCL | 0.0386 | 95% H-Stat (DL/2) UCL | 0.0164 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | N/A |
| | | SD in Log Scale | N/A |
| | | Mean in Original Scale | N/A |
| | | SD in Original Scale | N/A |
| | | 95% Percentile Bootstrap UCL | N/A |
| | | 95% BCA Bootstrap UCL | N/A |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | N/A | Data do not follow a Discernable Distribution (0.05) |
| Theta Star | N/A | |
| nu star | N/A | |
| A-D Test Statistic | 0.355 | |
| 5% A-D Critical Value | N/A | |
| K-S Test Statistic | N/A | |
| 5% K-S Critical Value | N/A | |
| Data not Gamma Distributed at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | N/A | Mean | 0.00773 |
| Maximum | N/A | SD | 0.0191 |
| Mean | N/A | SE of Mean | 0.00299 |
| Median | N/A | 95% KM (t) UCL | 0.0127 |
| SD | N/A | 95% KM (z) UCL | 0.0126 |
| k star | N/A | 95% KM (jackknife) UCL | 0.121 |
| Theta star | N/A | 95% KM (bootstrap t) UCL | 0.00785 |
| Nu star | N/A | 95% KM (BCA) UCL | 0.18 |
| AppChi2 | N/A | 95% KM (Percentile Bootstrap) UCL | N/A |
| 95% Gamma Approximate UCL | N/A | 95% KM (Chebyshev) UCL | 0.0208 |
| 95% Adjusted Gamma UCL | N/A | 97.5% KM (Chebyshev) UCL | 0.0264 |
| | | 99% KM (Chebyshev) UCL | 0.0375 |
| | | **Potential UCLs to Use** | |
| | | 97.5% KM (Chebyshev) UCL | 0.0264 |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_54 Carbon tetrachloride

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 88 | Number of Detected Data | 16 |
| Number of Unique Samples | 12 | Number of Non-Detect Data | 72 |
| | | Percent Non-Detects | 81.82% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.00014 | Minimum Detected | -8.874 |
| Maximum Detected | 0.001 | Maximum Detected | -6.908 |
| Mean of Detected | 0.0003344 | Mean of Detected | -8.149 |
| SD of Detected | 0.0002206 | SD of Detected | 0.519 |
| Minimum Non-Detect | 0.0002 | Minimum Non-Detect | -8.517 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 88 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.738 | Lilliefors Test Statistic | 0.892 |
| 5% Lilliefors Critical Value | 0.887 | 5% Lilliefors Critical Value | 0.887 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.019 | Mean | -6.94 |
| SD | 0.0819 | SD | 1.906 |
| 95% DL/2 (t) UCL | 0.0336 | 95% H-Stat (DL/2) UCL | 0.0272 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -8.315 |
| | | SD in Log Scale | 0.401 |
| | | Mean in Original Scale | 0.00026643 |
| | | SD in Original Scale | 0.00012639 |
| | | 95% Percentile Bootstrap UCL | 0.00028958 |
| | | 95% BCA Bootstrap UCL | 0.00029335 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 2.958 | Data Follow Appr. Gamma Distribution at 5% Significance Level |
| Theta Star | 0.000113 | |
| nu star | 94.66 | |
| A-D Test Statistic | 1.011 | |
| 5% A-D Critical Value | 0.743 | |
| K-S Test Statistic | 0.743 | |
| 5% K-S Critical Value | 0.216 | |
| Data follow Appr. Gamma Distribution at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0.00014 | Mean | 0.00026831 |
| Maximum | 0.001 | SD | 0.00014561 |
| Mean | 0.0003239 | SE of Mean | 0.000027327 |
| Median | 0.0003134 | 95% KM (t) UCL | 0.00031374 |
| SD | 9.682E-05 | 95% KM (z) UCL | 0.00031326 |
| k star | 15.74 | 95% KM (jackknife) UCL | 0.00031249 |
| Theta star | 2.058E-05 | 95% KM (bootstrap t) UCL | 0.00032843 |
| Nu star | 2771 | 95% KM (BCA) UCL | 0.00032097 |
| AppChi2 | 2649 | 95% KM (Percentile Bootstrap) UCL | 0.00031615 |
| 95% Gamma Approximate UCL | 0.0003388 | 95% KM (Chebyshev) UCL | 0.00038742 |
| 95% Adjusted Gamma UCL | 0.000339 | 97.5% KM (Chebyshev) UCL | 0.00043897 |
| | | 99% KM (Chebyshev) UCL | 0.00054021 |
| | | **Potential UCLs to Use** | |
| | | 95% KM (t) UCL | 0.00031374 |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_55 Chlorobenzene

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 87 | Number of Detected Data | 9 |
| Number of Unique Samples | 9 | Number of Non-Detect Data | 78 |
| | | Percent Non-Detects | 89.66% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.002 | Minimum Detected | -6.215 |
| Maximum Detected | 0.5 | Maximum Detected | -0.693 |
| Mean of Detected | 0.0594 | Mean of Detected | -5.007 |
| SD of Detected | 0.165 | SD of Detected | 1.684 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 87 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.402 | Lilliefors Test Statistic | 0.654 |
| 5% Lilliefors Critical Value | 0.829 | 5% Lilliefors Critical Value | 0.829 |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0244 | Mean | -6.386 |
| SD | 0.0852 | SD | 2.008 |
| 95% DL/2 (t) UCL | 0.0396 | 95% H-Stat (DL/2) UCL | 0.0373 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -10.3 |
| | | SD in Log Scale | 2.838 |
| | | Mean in Original Scale | 0.00625 |
| | | SD in Original Scale | 0.0536 |
| | | 95% Percentile Bootstrap UCL | 0.0177 |
| | | 95% BCA Bootstrap UCL | 0.0236 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 0.283 | **Data do not follow a Discernable Distribution (0.05)** | |
| Theta Star | 0.21 | | |
| nu star | 5.095 | | |
| A-D Test Statistic | 2.183 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.805 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.805 | Mean | 0.00816 |
| 5% K-S Critical Value | 0.301 | SD | 0.0537 |
| Data not Gamma Distributed at 5% Significance Level | | SE of Mean | 0.00618 |
| | | 95% KM (t) UCL | 0.0184 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.0183 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.0175 |
| Minimum | 0 | 95% KM (bootstrap t) UCL | 0.479 |
| Maximum | 18.94 | 95% KM (BCA) UCL | 0.0255 |
| Mean | 3.582 | 95% KM (Percentile Bootstrap) UCL | 0.0198 |
| Median | 1.639 | 95% KM (Chebyshev) UCL | 0.0351 |
| SD | 4.734 | 97.5% KM (Chebyshev) UCL | 0.0467 |
| k star | 0.207 | 99% KM (Chebyshev) UCL | 0.0696 |
| Theta star | 17.28 | | |
| Nu star | 36.06 | **Potential UCLs to Use** | |
| AppChi2 | 23.32 | 95% KM (Chebyshev) UCL | 0.0351 |
| 95% Gamma Approximate UCL | 5.539 | | |
| 95% Adjusted Gamma UCL | 5.581 | | |

Note: DL/2 is not a recommended method.

ProUCL

General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_56 Chloroform

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 88 | Number of Detected Data | 85 |
| Number of Unique Samples | 67 | Number of Non-Detect Data | 3 |
| | | Percent Non-Detects | 3.41% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.0029 | Minimum Detected | -5.843 |
| Maximum Detected | 2.8 | Maximum Detected | 1.03 |
| Mean of Detected | 0.246 | Mean of Detected | -2.74 |
| SD of Detected | 0.523 | SD of Detected | 1.606 |
| Minimum Non-Detect | 0.02 | Minimum Non-Detect | -3.912 |
| Maximum Non-Detect | 0.63 | Maximum Non-Detect | -0.462 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 79 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 9 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 89.77% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.347 | Lilliefors Test Statistic | 0.0791 |
| 5% Lilliefors Critical Value | 0.0961 | 5% Lilliefors Critical Value | 0.0961 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.243 | Mean | -2.731 |
| SD | 0.515 | SD | 1.604 |
| 95% DL/2 (t) UCL | 0.335 | 95% H-Stat (DL/2) UCL | 0.435 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE yields a negative mean** | | Mean in Log Scale | -2.768 |
| | | SD in Log Scale | 1.591 |
| | | Mean in Original Scale | 0.239 |
| | | SD in Original Scale | 0.515 |
| | | 95% Percentile Bootstrap UCL | 0.337 |
| | | 95% BCA Bootstrap UCL | 0.367 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 0.469 | Data appear Lognormal at 5% Significance Level | |
| Theta Star | 0.524 | | |
| nu star | 79.77 | | |
| A-D Test Statistic | 4.52 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.824 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.824 | Mean | 0.239 |
| 5% K-S Critical Value | 0.103 | SD | 0.512 |
| Data not Gamma Distributed at 5% Significance Level | | SE of Mean | 0.055 |
| | | 95% KM (t) UCL | 0.331 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.33 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.331 |
| Minimum | 0 | 95% KM (bootstrap t) UCL | 0.368 |
| Maximum | 2.8 | 95% KM (BCA) UCL | 0.331 |
| Mean | 0.239 | 95% KM (Percentile Bootstrap) UCL | 0.335 |
| Median | 0.07 | 95% KM (Chebyshev) UCL | 0.479 |
| SD | 0.515 | 97.5% KM (Chebyshev) UCL | 0.582 |
| k star | 0.424 | 99% KM (Chebyshev) UCL | 0.786 |
| Theta star | 0.565 | | |
| Nu star | 74.6 | **Potential UCLs to Use** | |
| AppChi2 | 55.71 | 97.5% KM (Chebyshev) UCL | 0.582 |
| 95% Gamma Approximate UCL | 0.321 | | |
| 95% Adjusted Gamma UCL | 0.322 | | |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_57 Chloromethane

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 86 | Number of Detected Data | 10 |
| Number of Unique Samples | 9 | Number of Non-Detect Data | 76 |
| | | Percent Non-Detects | 88.37% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.0004 | Minimum Detected | -7.824 |
| Maximum Detected | 0.0046 | Maximum Detected | -5.382 |
| Mean of Detected | 0.00248 | Mean of Detected | -6.3 |
| SD of Detected | 0.00157 | SD of Detected | 0.93 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1.3 | Maximum Non-Detect | 0.262 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 86 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.913 | Lilliefors Test Statistic | 0.835 |
| 5% Lilliefors Critical Value | 0.842 | 5% Lilliefors Critical Value | 0.842 |
| Data appear Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0258 | Mean | -6.622 |
| SD | 0.104 | SD | 1.935 |
| 95% DL/2 (t) UCL | 0.0445 | 95% H-Stat (DL/2) UCL | 0.0282 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -7.88 |
| | | SD in Log Scale | 0.993 |
| | | Mean in Original Scale | 0.00064784 |
| | | SD in Original Scale | 0.00088743 |
| | | 95% Percentile Bootstrap UCL | 0.00081158 |
| | | 95% BCA Bootstrap UCL | 0.00084067 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 1.343 | Data appear Normal at 5% Significance Level |
| Theta Star | 0.00184 | |
| nu star | 26.86 | |
| A-D Test Statistic | 0.637 | |
| 5% A-D Critical Value | 0.737 | |
| K-S Test Statistic | 0.737 | |
| 5% K-S Critical Value | 0.27 | |
| Data appear Gamma Distributed at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0.0004 | Mean | 0.00075066 |
| Maximum | 0.00508 | SD | 0.00097934 |
| Mean | 0.00345 | SE of Mean | 0.00013311 |
| Median | 0.00363 | 95% KM (t) UCL | 0.00097202 |
| SD | 0.00103 | 95% KM (z) UCL | 0.00096961 |
| k star | 7.051 | 95% KM (jackknife) UCL | 0.00092652 |
| Theta star | 0.0004893 | 95% KM (bootstrap t) UCL | 0.00101 |
| Nu star | 1213 | 95% KM (BCA) UCL | 0.00222 |
| AppChi2 | 1133 | 95% KM (Percentile Bootstrap) UCL | 0.0013 |
| 95% Gamma Approximate UCL | 0.00369 | 95% KM (Chebyshev) UCL | 0.00133 |
| 95% Adjusted Gamma UCL | 0.0037 | 97.5% KM (Chebyshev) UCL | 0.00158 |
| | | 99% KM (Chebyshev) UCL | 0.00208 |
| | | **Potential UCLs to Use** | |
| | | 95% KM (t) UCL | 0.00097202 |
| | | 95% KM (Percentile Bootstrap) UCL | 0.0013 |

Note: DL/2 is not a recommended method.

ProUCL — General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_58 Dibromochloromethane

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 87 | Number of Detected Data | 4 |
| Number of Unique Samples | 4 | Number of Non-Detect Data | 83 |
| | | Percent Non-Detects | 95.40% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.00054 | Minimum Detected | -7.524 |
| Maximum Detected | 0.016 | Maximum Detected | -4.135 |
| Mean of Detected | 0.00509 | Mean of Detected | -6.206 |
| SD of Detected | 0.00738 | SD of Detected | 1.603 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 87 |
| For all methods (except KM, DL/2, and ROS Methods). | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.748 | Lilliefors Test Statistic | 0.883 |
| 5% Lilliefors Critical Value | 0.748 | 5% Lilliefors Critical Value | 0.748 |
| **Data appear Normal at 5% Significance Level** | | **Data appear Lognormal at 5% Significance Level** | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0207 | Mean | -6.648 |
| SD | 0.0828 | SD | 1.907 |
| 95% DL/2 (t) UCL | 0.0354 | 95% H-Stat (DL/2) UCL | 0.0197 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -12.78 |
| | | SD in Log Scale | 2.895 |
| | | Mean in Original Scale | 0.00025358 |
| | | SD in Original Scale | 0.00174 |
| | | 95% Percentile Bootstrap UCL | 0.00061634 |
| | | 95% BCA Bootstrap UCL | 0.00094404 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 0.332 | **Data appear Normal at 5% Significance Level** |
| Theta Star | 0.0153 | |
| nu star | 2.652 | |
| A-D Test Statistic | 0.431 | |
| 5% A-D Critical Value | 0.674 | |
| K-S Test Statistic | 0.674 | |
| 5% K-S Critical Value | 0.407 | |
| **Data appear Gamma Distributed at 5% Significance Level** | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0 | Mean | 0.00079302 |
| Maximum | 7.215 | SD | 0.00179 |
| Mean | 1.726 | SE of Mean | 0.00023891 |
| Median | 1.063 | 95% KM (t) UCL | 0.00119 |
| SD | 1.953 | 95% KM (z) UCL | 0.00119 |
| k star | 0.417 | 95% KM (jackknife) UCL | 0.0011 |
| Theta star | 4.135 | 95% KM (bootstrap t) UCL | 0.00175 |
| Nu star | 72.61 | 95% KM (BCA) UCL | 0.016 |
| AppChi2 | 53.98 | 95% KM (Percentile Bootstrap) UCL | N/A |
| 95% Gamma Approximate UCL | 2.321 | 95% KM (Chebyshev) UCL | 0.00183 |
| 95% Adjusted Gamma UCL | N/A | 97.5% KM (Chebyshev) UCL | 0.00228 |
| | | 99% KM (Chebyshev) UCL | 0.00317 |
| | | **Potential UCLs to Use** | |
| | | 95% KM (t) UCL | 0.00119 |
| | | 95% KM (Percentile Bootstrap) UCL | N/A |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_59 Dichlorodifluoromethane (Freon 12)

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 87 | Number of Detected Data | 34 |
| Number of Unique Samples | 21 | Number of Non-Detect Data | 53 |
| | | Percent Non-Detects | 60.92% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.0003 | Minimum Detected | -8.112 |
| Maximum Detected | 0.0047 | Maximum Detected | -5.36 |
| Mean of Detected | 0.00144 | Mean of Detected | -6.733 |
| SD of Detected | 0.0009933 | SD of Detected | 0.621 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1.3 | Maximum Non-Detect | 0.262 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 87 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.811 | Lilliefors Test Statistic | 0.962 |
| 5% Lilliefors Critical Value | 0.933 | 5% Lilliefors Critical Value | 0.933 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0416 | Mean | -5.616 |
| SD | 0.127 | SD | 1.85 |
| 95% DL/2 (t) UCL | 0.0643 | 95% H-Stat (DL/2) UCL | 0.132 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -6.843 |
| | | SD in Log Scale | 0.551 |
| | | Mean in Original Scale | 0.00124 |
| | | SD in Original Scale | 0.00077057 |
| | | 95% Percentile Bootstrap UCL | 0.00138 |
| | | 95% BCA Bootstrap UCL | 0.0014 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 2.543 | Data appear Lognormal at 5% Significance Level |
| Theta Star | 0.000567 | |
| nu star | 173 | |
| A-D Test Statistic | 0.969 | |
| 5% A-D Critical Value | 0.755 | |
| K-S Test Statistic | 0.755 | |
| 5% K-S Critical Value | 0.152 | |
| Data not Gamma Distributed at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0 | Mean | 0.00131 |
| Maximum | 0.0047 | SD | 0.00093343 |
| Mean | 0.00148 | SE of Mean | 0.00014761 |
| Median | 0.00151 | 95% KM (t) UCL | 0.00156 |
| SD | 0.0007937 | 95% KM (z) UCL | 0.00155 |
| k star | 1.713 | 95% KM (jackknife) UCL | 0.00156 |
| Theta star | 0.0008658 | 95% KM (bootstrap t) UCL | 0.00163 |
| Nu star | 298 | 95% KM (BCA) UCL | 0.00158 |
| AppChi2 | 259 | 95% KM (Percentile Bootstrap) UCL | 0.00158 |
| 95% Gamma Approximate UCL | 0.00171 | 95% KM (Chebyshev) UCL | 0.00196 |
| 95% Adjusted Gamma UCL | 0.00171 | 97.5% KM (Chebyshev) UCL | 0.00223 |
| Note: DL/2 is not a recommended method. | | 99% KM (Chebyshev) UCL | 0.00278 |
| | | **Potential UCLs to Use** | |
| | | 95% KM (t) UCL | 0.00156 |
| | | 95% KM (% Bootstrap) UCL | 0.00158 |

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| User Selected Options | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_60 Dichlorofluoromethane (Freon 21)

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 6 | Number of Unique Samples | 5 |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum | 0.0016 | Minimum of Log Data | -6.438 |
| Maximum | 0.0097 | Maximum of Log Data | -4.636 |
| Mean | 0.00568 | Mean of log Data | -5.371 |
| Median | 0.00535 | SD of log Data | 0.74 |
| SD | 0.0035 | | |
| Coefficient of Variation | 0.617 | | |
| Skewness | 0.172 | | |
| **Relevant UCL Statistics** | | | |
| **Normal Distribution Test** | | **Lognormal Distribution Test** | |
| Shapiro Wilk Test Statistic | 0.894 | Shapiro Wilk Test Statistic | 0.91 |
| Shapiro Wilk Critical Value | 0.788 | Shapiro Wilk Critical Value | 0.788 |
| Data appear Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| 95% Student's-t UCL | 0.00857 | 95% H-UCL | 0.0189 |
| **95% UCLs (Adjusted for Skewness)** | | 95% Chebyshev (MVUE) UCL | 0.0134 |
| 95% Adjusted-CLT UCL | 0.00814 | 97.5% Chebyshev (MVUE) UCL | 0.0167 |
| 95% Modified-t UCL | 0.00858 | 99% Chebyshev (MVUE) UCL | 0.0231 |
| **Gamma Distribution Test** | | **Data Distribution** | |
| k star (bias corrected) | 1.431 | Data appear Normal at 5% Significance Level | |
| Theta Star | 0.00397 | | |
| nu star | 17.18 | | |
| Approximate Chi Square Value (.05) | 8.799 | **Nonparametric Statistics** | |
| Adjusted Level of Significance | 0.0122 | 95% CLT UCL | 0.00804 |
| Adjusted Chi Square Value | 6.747 | 95% Jackknife UCL | 0.00857 |
| | | 95% Standard Bootstrap UCL | 0.00778 |
| Anderson-Darling Test Statistic | 0.321 | 95% Bootstrap-t UCL | 0.00878 |
| Anderson-Darling 5% Critical Value | 0.702 | 95% Hall's Bootstrap UCL | 0.00859 |
| Kolmogorov-Smirnov Test Statistic | 0.208 | 95% Percentile Bootstrap UCL | 0.0079 |
| Kolmogorov-Smirnov 5% Critical Value | 0.335 | 95% BCA Bootstrap UCL | 0.0079 |
| Data appear Gamma Distributed at 5% Significance Level | | 95% Chebyshev(Mean, Sd) UCL | 0.0119 |
| | | 97.5% Chebyshev(Mean, Sd) UCL | 0.0146 |
| **Assuming Gamma Distribution** | | 99% Chebyshev(Mean, Sd) UCL | 0.0199 |
| 95% Approximate Gamma UCL | 0.0111 | | |
| 95% Adjusted Gamma UCL | 0.0145 | | |
| **Potential UCL to Use** | | Use 95% Student's-t UCL | 0.00857 |

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_61 Ethylbenzene

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 87 | Number of Detected Data | 7 |
| Number of Unique Samples | 7 | Number of Non-Detect Data | 80 |
| | | Percent Non-Detects | 91.95% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.094 | Minimum Detected | -2.364 |
| Maximum Detected | 15 | Maximum Detected | 2.708 |
| Mean of Detected | 5.399 | Mean of Detected | 1.108 |
| SD of Detected | 4.678 | SD of Detected | 1.613 |
| Minimum Non-Detect | 0.5 | Minimum Non-Detect | -0.693 |
| Maximum Non-Detect | 1000 | Maximum Non-Detect | 6.908 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 87 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.831 | Lilliefors Test Statistic | 0.741 |
| 5% Lilliefors Critical Value | 0.803 | 5% Lilliefors Critical Value | 0.803 |
| **Data appear Normal at 5% Significance Level** | | Data not Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 24.88 | Mean | 0.555 |
| SD | 85.25 | SD | 2.053 |
| 95% DL/2 (t) UCL | 40.07 | 95% H-Stat (DL/2) UCL | 43.79 |
| | | | |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -1.762 |
| | | SD in Log Scale | 1.604 |
| | | Mean in Original Scale | 0.696 |
| | | SD in Original Scale | 1.899 |
| | | 95% Percentile Bootstrap UCL | 1.053 |
| | | 95% BCA Bootstrap UCL | 1.273 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 0.665 | **Data appear Normal at 5% Significance Level** |
| Theta Star | 8.114 | |
| nu star | 9.316 | |
| | | |
| A-D Test Statistic | 0.609 | **Nonparametric Statistics** |
| 5% A-D Critical Value | 0.728 | Kaplan-Meier (KM) Method |
| K-S Test Statistic | 0.728 | Mean 0.694 |
| 5% K-S Critical Value | 0.32 | SD 2.128 |
| **Data follow Appr. Gamma Distribution at 5% Significance Level** | | SE of Mean 0.283 |
| | | 95% KM (t) UCL 1.164 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL 1.159 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL 2.666 |
| Minimum | 0 | 95% KM (bootstrap t) UCL 1.248 |
| Maximum | 15 | 95% KM (BCA) UCL 4.211 |
| Mean | 2.86 | 95% KM (Percentile Bootstrap) UCL 4.184 |
| Median | 2.617 | 95% KM (Chebyshev) UCL 1.927 |
| SD | 2.545 | 97.5% KM (Chebyshev) UCL 2.46 |
| k star | 0.161 | 99% KM (Chebyshev) UCL 3.508 |
| Theta star | 17.8 | |
| Nu star | 27.95 | **Potential UCLs to Use** |
| AppChi2 | 16.89 | 95% KM (t) UCL 1.164 |
| 95% Gamma Approximate UCL | 4.733 | 95% KM (Percentile Bootstrap) UCL 4.184 |
| 95% Adjusted Gamma UCL | 4.774 | |

Note: DL/2 is not a recommended method.

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_62 Trichlorofluoromethane (Freon 11)

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 88 | Number of Detected Data | 83 |
| Number of Unique Samples | 56 | Number of Non-Detect Data | 5 |
| | | Percent Non-Detects | 5.68% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.007 | Minimum Detected | -4.962 |
| Maximum Detected | 1 | Maximum Detected | 0 |
| Mean of Detected | 0.265 | Mean of Detected | -1.64 |
| SD of Detected | 0.205 | SD of Detected | 0.883 |
| Minimum Non-Detect | 0.2 | Minimum Non-Detect | -1.609 |
| Maximum Non-Detect | 1.3 | Maximum Non-Detect | 0.262 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 88 |
| For all methods (except KM, DL/2, and ROS Methods). | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.155 | Lilliefors Test Statistic | 0.117 |
| 5% Lilliefors Critical Value | 0.0973 | 5% Lilliefors Critical Value | 0.0973 |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.272 | Mean | -1.612 |
| SD | 0.207 | SD | 0.881 |
| 95% DL/2 (t) UCL | 0.309 | 95% H-Stat (DL/2) UCL | 0.429 |
| | | | |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -1.651 |
| | | SD in Log Scale | 0.862 |
| | | Mean in Original Scale | 0.259 |
| | | SD in Original Scale | 0.201 |
| | | 95% Percentile Bootstrap UCL | 0.295 |
| | | 95% BCA Bootstrap UCL | 0.297 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 1.697 | Data appear Gamma Distributed at 5% Significance Level |
| Theta Star | 0.156 | |
| nu star | 281.8 | |
| | | |
| A-D Test Statistic | 0.313 | |
| 5% A-D Critical Value | 0.767 | |
| K-S Test Statistic | 0.767 | |
| 5% K-S Critical Value | 0.0996 | |
| Data appear Gamma Distributed at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0.007 | Mean | 0.262 |
| Maximum | 1 | SD | 0.202 |
| Mean | 0.264 | SE of Mean | 0.0221 |
| Median | 0.205 | 95% KM (t) UCL | 0.299 |
| SD | 0.2 | 95% KM (z) UCL | 0.298 |
| k star | 1.771 | 95% KM (jackknife) UCL | 0.299 |
| Theta star | 0.149 | 95% KM (bootstrap t) UCL | 0.303 |
| Nu star | 311.7 | 95% KM (BCA) UCL | 0.301 |
| AppChi2 | 271.8 | 95% KM (Percentile Bootstrap) UCL | 0.3 |
| 95% Gamma Approximate UCL | 0.302 | 95% KM (Chebyshev) UCL | 0.358 |
| 95% Adjusted Gamma UCL | 0.303 | 97.5% KM (Chebyshev) UCL | 0.4 |
| | | 99% KM (Chebyshev) UCL | 0.482 |
| | | | |
| | | **Potential UCLs to Use** | |
| | | 95% KM (Chebyshev) UCL | 0.358 |

Note: DL/2 is not a recommended method.

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_63 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 88 | Number of Detected Data | 83 |
| Number of Unique Samples | 56 | Number of Non-Detect Data | 5 |
| | | Percent Non-Detects | 5.68% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.011 | Minimum Detected | -4.51 |
| Maximum Detected | 2.8 | Maximum Detected | 1.03 |
| Mean of Detected | 0.715 | Mean of Detected | -0.704 |
| SD of Detected | 0.615 | SD of Detected | 0.949 |
| Minimum Non-Detect | 1 | Minimum Non-Detect | 0 |
| Maximum Non-Detect | 6.3 | Maximum Non-Detect | 1.841 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 88 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.161 | Lilliefors Test Statistic | 0.0704 |
| 5% Lilliefors Critical Value | 0.0973 | 5% Lilliefors Critical Value | 0.0973 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.745 | Mean | -0.667 |
| SD | 0.653 | SD | 0.947 |
| 95% DL/2 (t) UCL | 0.86 | 95% H-Stat (DL/2) UCL | 1.209 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -0.713 |
| | | SD in Log Scale | 0.925 |
| | | Mean in Original Scale | 0.7 |
| | | SD in Original Scale | 0.601 |
| | | 95% Percentile Bootstrap UCL | 0.81 |
| | | 95% BCA Bootstrap UCL | 0.818 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 1.452 | Data appear Gamma Distributed at 5% Significance Level | |
| Theta Star | 0.493 | | |
| nu star | 241 | | |
| A-D Test Statistic | 0.402 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.771 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.771 | Mean | 0.706 |
| 5% K-S Critical Value | 0.0999 | SD | 0.603 |
| Data appear Gamma Distributed at 5% Significance Level | | SE of Mean | 0.0655 |
| | | 95% KM (t) UCL | 0.815 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.814 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.815 |
| Minimum | 0.011 | 95% KM (bootstrap t) UCL | 0.832 |
| Maximum | 2.8 | 95% KM (BCA) UCL | 0.812 |
| Mean | 0.714 | 95% KM (Percentile Bootstrap) UCL | 0.806 |
| Median | 0.5 | 95% KM (Chebyshev) UCL | 0.992 |
| SD | 0.599 | 97.5% KM (Chebyshev) UCL | 1.115 |
| k star | 1.52 | 99% KM (Chebyshev) UCL | 1.358 |
| Theta star | 0.47 | | |
| Nu star | 267.6 | **Potential UCLs to Use** | |
| AppChi2 | 230.7 | 95% KM (Chebyshev) UCL | 0.992 |
| 95% Gamma Approximate UCL | 0.828 | | |
| 95% Adjusted Gamma UCL | 0.831 | | |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_64 Isopropylbenzene

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 87 | Number of Detected Data | 7 |
| Number of Unique Samples | 6 | Number of Non-Detect Data | 80 |
| | | Percent Non-Detects | 91.95% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.00018 | Minimum Detected | -8.623 |
| Maximum Detected | 0.0024 | Maximum Detected | -6.032 |
| Mean of Detected | 0.00152 | Mean of Detected | -6.77 |
| SD of Detected | 0.0008757 | SD of Detected | 0.968 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 87 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.9 | Lilliefors Test Statistic | 0.801 |
| 5% Lilliefors Critical Value | 0.803 | 5% Lilliefors Critical Value | 0.803 |
| **Data appear Normal at 5% Significance Level** | | Data not Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0243 | Mean | -6.439 |
| SD | 0.0853 | SD | 2.008 |
| 95% DL/2 (t) UCL | 0.0395 | 95% H-Stat (DL/2) UCL | 0.0383 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -8.412 |
| | | SD in Log Scale | 0.988 |
| | | Mean in Original Scale | 0.00036843 |
| | | SD in Original Scale | 0.00046496 |
| | | 95% Percentile Bootstrap UCL | 0.00044994 |
| | | 95% BCA Bootstrap UCL | 0.00046898 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 1.207 | **Data appear Normal at 5% Significance Level** | |
| Theta Star | 0.00126 | | |
| nu star | 16.9 | | |
| A-D Test Statistic | 0.582 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.716 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.716 | Mean | 0.00038174 |
| 5% K-S Critical Value | 0.315 | SD | 0.00056616 |
| **Data appear Gamma Distributed at 5% Significance Level** | | SE of Mean | 0.000089075 |
| | | 95% KM (t) UCL | 0.00052985 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.00052826 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.00060481 |
| Minimum | 0.00018 | 95% KM (bootstrap t) UCL | 0.00052111 |
| Maximum | 0.0024 | 95% KM (BCA) UCL | 0.00175 |
| Mean | 0.00108 | 95% KM (Percentile Bootstrap) UCL | 0.00153 |
| Median | 0.0009869 | 95% KM (Chebyshev) UCL | 0.00077001 |
| SD | 0.0004227 | 97.5% KM (Chebyshev) UCL | 0.00093802 |
| k star | 6.093 | 99% KM (Chebyshev) UCL | 0.00127 |
| Theta star | 0.0001774 | | |
| Nu star | 1060 | **Potential UCLs to Use** | |
| AppChi2 | 985.6 | 95% KM (t) UCL | 0.00052985 |
| 95% Gamma Approximate UCL | 0.00116 | 95% KM (Percentile Bootstrap) UCL | 0.00153 |
| 95% Adjusted Gamma UCL | 0.00116 | | |

Note: DL/2 is not a recommended method.

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_65 Methyl tert-butyl ether (MTBE)

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 88 | Number of Detected Data | 45 |
| Number of Unique Samples | 38 | Number of Non-Detect Data | 43 |
| | | Percent Non-Detects | 48.86% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.0003 | Minimum Detected | -8.112 |
| Maximum Detected | 0.034 | Maximum Detected | -3.381 |
| Mean of Detected | 0.00534 | Mean of Detected | -5.871 |
| SD of Detected | 0.00641 | SD of Detected | 1.201 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 88 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.737 | Lilliefors Test Statistic | 0.967 |
| 5% Lilliefors Critical Value | 0.945 | 5% Lilliefors Critical Value | 0.945 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0239 | Mean | -5.674 |
| SD | 0.0823 | SD | 1.707 |
| 95% DL/2 (t) UCL | 0.0385 | 95% H-Stat (DL/2) UCL | 0.0611 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -6.39 |
| | | SD in Log Scale | 1.152 |
| | | Mean in Original Scale | 0.00337 |
| | | SD in Original Scale | 0.00504 |
| | | 95% Percentile Bootstrap UCL | 0.00433 |
| | | 95% BCA Bootstrap UCL | 0.00451 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 0.869 | Data Follow Appr. Gamma Distribution at 5% Significance Level |
| Theta Star | 0.00614 | |
| nu star | 78.19 | |
| A-D Test Statistic | 0.648 | |
| 5% A-D Critical Value | 0.781 | |
| K-S Test Statistic | 0.781 | |
| 5% K-S Critical Value | 0.136 | |
| Data follow Appr. Gamma Distribution at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0 | Mean | 0.00364 |
| Maximum | 0.034 | SD | 0.00537 |
| Mean | 0.00528 | SE of Mean | 0.00063196 |
| Median | 0.00411 | 95% KM (t) UCL | 0.0047 |
| SD | 0.00543 | 95% KM (z) UCL | 0.00468 |
| k star | 0.405 | 95% KM (jackknife) UCL | 0.00469 |
| Theta star | 0.013 | 95% KM (bootstrap t) UCL | 0.00491 |
| Nu star | 71.29 | 95% KM (BCA) UCL | 0.00468 |
| AppChi2 | 52.85 | 95% KM (Percentile Bootstrap) UCL | 0.00472 |
| 95% Gamma Approximate UCL | 0.00712 | 95% KM (Chebyshev) UCL | 0.0064 |
| 95% Adjusted Gamma UCL | 0.00716 | 97.5% KM (Chebyshev) UCL | 0.00759 |
| | | 99% KM (Chebyshev) UCL | 0.00993 |
| | | **Potential UCLs to Use** | |
| | | 95% KM (BCA) UCL | 0.00468 |

Note: DL/2 is not a recommended method.

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_66 Methylene chloride

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 88 | Number of Detected Data | 25 |
| Number of Unique Samples | 24 | Number of Non-Detect Data | 63 |
| | | Percent Non-Detects | 71.59% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.3 | Minimum Detected | -1.204 |
| Maximum Detected | 11000 | Maximum Detected | 9.306 |
| Mean of Detected | 2062 | Mean of Detected | 4.32 |
| SD of Detected | 3277 | SD of Detected | 3.605 |
| Minimum Non-Detect | 0.17 | Minimum Non-Detect | -1.772 |
| Maximum Non-Detect | 13000 | Maximum Non-Detect | 9.473 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 88 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.692 | Lilliefors Test Statistic | 0.892 |
| 5% Lilliefors Critical Value | 0.918 | 5% Lilliefors Critical Value | 0.918 |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 690.6 | Mean | 1.778 |
| SD | 2051 | SD | 3.19 |
| 95% DL/2 (t) UCL | 1054 | 95% H-Stat (DL/2) UCL | 8355 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -1.901 |
| | | SD in Log Scale | 5.175 |
| | | Mean in Original Scale | 586 |
| | | SD in Original Scale | 1959 |
| | | 95% Percentile Bootstrap UCL | 963.8 |
| | | 95% BCA Bootstrap UCL | 1028 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 0.219 | Data do not follow a Discernable Distribution (0.05) | |
| Theta Star | 9396 | | |
| nu star | 10.97 | | |
| A-D Test Statistic | 1.427 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.887 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.887 | Mean | 593.5 |
| 5% K-S Critical Value | 0.193 | SD | 1958 |
| Data not Gamma Distributed at 5% Significance Level | | SE of Mean | 214.2 |
| | | 95% KM (t) UCL | 949.7 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 945.9 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 944.5 |
| Minimum | 0.3 | 95% KM (bootstrap t) UCL | 1128 |
| Maximum | 15098 | 95% KM (BCA) UCL | 987 |
| Mean | 2351 | 95% KM (Percentile Bootstrap) UCL | 984.9 |
| Median | 590.7 | 95% KM (Chebyshev) UCL | 1527 |
| SD | 3413 | 97.5% KM (Chebyshev) UCL | 1931 |
| k star | 0.359 | 99% KM (Chebyshev) UCL | 2725 |
| Theta star | 6548 | | |
| Nu star | 63.19 | **Potential UCLs to Use** | |
| AppChi2 | 45.9 | 97.5% KM (Chebyshev) UCL | 1931 |
| 95% Gamma Approximate UCL | 3237 | | |
| 95% Adjusted Gamma UCL | 3254 | | |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_67 Tetrachloroethene

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 88 | Number of Unique Samples | 71 |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum | 0.012 | Minimum of Log Data | -4.423 |
| Maximum | 210 | Maximum of Log Data | 5.347 |
| Mean | 18.25 | Mean of log Data | 0.485 |
| Median | 1.2 | SD of log Data | 2.18 |
| SD | 44.1 | | |
| Coefficient of Variation | 2.416 | | |
| Skewness | 2.88 | | |
| **Relevant UCL Statistics** | | | |
| **Normal Distribution Test** | | **Lognormal Distribution Test** | |
| Lilliefors Test Statistic | 0.435 | Lilliefors Test Statistic | 0.155 |
| Lilliefors Critical Value | 0.0944 | Lilliefors Critical Value | 0.0944 |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| 95% Student's-t UCL | 26.06 | 95% H-UCL | 40.13 |
| **95% UCLs (Adjusted for Skewness)** | | 95% Chebyshev (MVUE) UCL | 42.3 |
| 95% Adjusted-CLT UCL | 27.52 | 97.5% Chebyshev (MVUE) UCL | 53.67 |
| 95% Modified-t UCL | 26.31 | 99% Chebyshev (MVUE) UCL | 75.99 |
| **Gamma Distribution Test** | | **Data Distribution** | |
| k star (bias corrected) | 0.285 | Data do not follow a Discernable Distribution (0.05) | |
| Theta Star | 64.06 | | |
| nu star | 50.14 | | |
| Approximate Chi Square Value (.05) | 34.88 | **Nonparametric Statistics** | |
| Adjusted Level of Significance | 0.0473 | 95% CLT UCL | 25.98 |
| Adjusted Chi Square Value | 34.67 | 95% Jackknife UCL | 26.06 |
| | | 95% Standard Bootstrap UCL | 25.81 |
| Anderson-Darling Test Statistic | 8.884 | 95% Bootstrap-t UCL | 28.3 |
| Anderson-Darling 5% Critical Value | 0.873 | 95% Hall's Bootstrap UCL | 27.14 |
| Kolmogorov-Smirnov Test Statistic | 0.318 | 95% Percentile Bootstrap UCL | 26.63 |
| Kolmogorov-Smirnov 5% Critical Value | 0.104 | 95% BCA Bootstrap UCL | 27.74 |
| Data not Gamma Distributed at 5% Significance Level | | 95% Chebyshev(Mean, Sd) UCL | 38.74 |
| | | 97.5% Chebyshev(Mean, Sd) UCL | 47.61 |
| **Assuming Gamma Distribution** | | 99% Chebyshev(Mean, Sd) UCL | 65.02 |
| 95% Approximate Gamma UCL | 26.23 | | |
| 95% Adjusted Gamma UCL | 26.39 | | |
| **Potential UCL to Use** | | Use 99% Chebyshev (Mean, Sd) UCL | 65.02 |

ProUCL — General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_68 Toluene

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 87 | Number of Detected Data | 18 |
| Number of Unique Samples | 17 | Number of Non-Detect Data | 69 |
| | | Percent Non-Detects | 79.31% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.00014 | Minimum Detected | -8.874 |
| Maximum Detected | 1.3 | Maximum Detected | 0.262 |
| Mean of Detected | 0.196 | Mean of Detected | -3.238 |
| SD of Detected | 0.321 | SD of Detected | 2.345 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 0.63 | Maximum Non-Detect | -0.462 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 86 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 1 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 98.85% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.646 | Lilliefors Test Statistic | 0.947 |
| 5% Lilliefors Critical Value | 0.897 | 5% Lilliefors Critical Value | 0.897 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0499 | Mean | -6.135 |
| SD | 0.167 | SD | 2.352 |
| 95% DL/2 (t) UCL | 0.0796 | 95% H-Stat (DL/2) UCL | 0.113 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -8.004 |
| | | SD in Log Scale | 3.381 |
| | | Mean in Original Scale | 0.041 |
| | | SD in Original Scale | 0.164 |
| | | 95% Percentile Bootstrap UCL | 0.0725 |
| | | 95% BCA Bootstrap UCL | 0.0861 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 0.377 | Data appear Gamma Distributed at 5% Significance Level |
| Theta Star | 0.52 | |
| nu star | 13.57 | |
| A-D Test Statistic | 0.37 | |
| 5% A-D Critical Value | 0.819 | |
| K-S Test Statistic | 0.819 | |
| 5% K-S Critical Value | 0.218 | |
| Data appear Gamma Distributed at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0 | Mean | 0.0414 |
| Maximum | 2.342 | SD | 0.163 |
| Mean | 0.552 | SE of Mean | 0.018 |
| Median | 0.28 | 95% KM (t) UCL | 0.0714 |
| SD | 0.658 | 95% KM (z) UCL | 0.071 |
| k star | 0.189 | 95% KM (jackknife) UCL | 0.0691 |
| Theta star | 2.922 | 95% KM (bootstrap t) UCL | 0.102 |
| Nu star | 32.9 | 95% KM (BCA) UCL | 0.0777 |
| AppChi2 | 20.79 | 95% KM (Percentile Bootstrap) UCL | 0.0741 |
| 95% Gamma Approximate UCL | 0.874 | 95% KM (Chebyshev) UCL | 0.12 |
| 95% Adjusted Gamma UCL | 0.881 | 97.5% KM (Chebyshev) UCL | 0.154 |
| | | 99% KM (Chebyshev) UCL | 0.221 |
| | | **Potential UCLs to Use** | |
| | | 95% KM (t) UCL | 0.0714 |

Note: DL/2 is not a recommended method.

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_69 Trichloroethene (TCE)

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 88 | Number of Unique Samples | 66 |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum | 0.0084 | Minimum of Log Data | -4.78 |
| Maximum | 10 | Maximum of Log Data | 2.303 |
| Mean | 0.764 | Mean of log Data | -1.254 |
| Median | 0.28 | SD of log Data | 1.483 |
| SD | 1.348 | | |
| Coefficient of Variation | 1.765 | | |
| Skewness | 4.263 | | |
| **Relevant UCL Statistics** | | | |
| **Normal Distribution Test** | | **Lognormal Distribution Test** | |
| Lilliefors Test Statistic | 0.307 | Lilliefors Test Statistic | 0.0769 |
| Lilliefors Critical Value | 0.0944 | Lilliefors Critical Value | 0.0944 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| 95% Student's-t UCL | 1.003 | 95% H-UCL | 1.32 |
| **95% UCLs (Adjusted for Skewness)** | | 95% Chebyshev (MVUE) UCL | 1.624 |
| 95% Adjusted-CLT UCL | 1.07 | 97.5% Chebyshev (MVUE) UCL | 1.965 |
| 95% Modified-t UCL | 1.014 | 99% Chebyshev (MVUE) UCL | 2.636 |
| **Gamma Distribution Test** | | **Data Distribution** | |
| k star (bias corrected) | 0.61 | Data appear Lognormal at 5% Significance Level | |
| Theta Star | 1.253 | | |
| nu star | 107.4 | | |
| Approximate Chi Square Value (.05) | 84.45 | **Nonparametric Statistics** | |
| Adjusted Level of Significance | 0.0473 | 95% CLT UCL | 1.001 |
| Adjusted Chi Square Value | 84.11 | 95% Jackknife UCL | 1.003 |
| | | 95% Standard Bootstrap UCL | 1.003 |
| Anderson-Darling Test Statistic | 2.678 | 95% Bootstrap-t UCL | 1.11 |
| Anderson-Darling 5% Critical Value | 0.806 | 95% Hall's Bootstrap UCL | 1.323 |
| Kolmogorov-Smirnov Test Statistic | 0.164 | 95% Percentile Bootstrap UCL | 1.015 |
| Kolmogorov-Smirnov 5% Critical Value | 0.0999 | 95% BCA Bootstrap UCL | 1.095 |
| Data not Gamma Distributed at 5% Significance Level | | 95% Chebyshev(Mean, Sd) UCL | 1.391 |
| | | 97.5% Chebyshev(Mean, Sd) UCL | 1.662 |
| **Assuming Gamma Distribution** | | 99% Chebyshev(Mean, Sd) UCL | 2.194 |
| 95% Approximate Gamma UCL | 0.971 | | |
| 95% Adjusted Gamma UCL | 0.975 | | |
| **Potential UCL to Use** | | Use 95% H-UCL | 1.32 |

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_70 Vinyl chloride

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 87 | Number of Detected Data | 4 |
| Number of Unique Samples | 4 | Number of Non-Detect Data | 83 |
| | | Percent Non-Detects | 95.40% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.00064 | Minimum Detected | -7.354 |
| Maximum Detected | 0.0011 | Maximum Detected | -6.812 |
| Mean of Detected | 0.000855 | Mean of Detected | -7.084 |
| SD of Detected | 0.0001949 | SD of Detected | 0.229 |
| Minimum Non-Detect | 0.0002 | Minimum Non-Detect | -8.517 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 87 |
| For all methods (except KM, DL/2, and ROS Methods). | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.993 | Lilliefors Test Statistic | 1 |
| 5% Lilliefors Critical Value | 0.748 | 5% Lilliefors Critical Value | 0.748 |
| **Data appear Normal at 5% Significance Level** | | **Data appear Lognormal at 5% Significance Level** | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0196 | Mean | -6.843 |
| SD | 0.0824 | SD | 1.92 |
| 95% DL/2 (t) UCL | 0.0342 | 95% H-Stat (DL/2) UCL | 0.0174 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -8.548 |
| | | SD in Log Scale | 0.682 |
| | | Mean in Original Scale | 0.00024451 |
| | | SD in Original Scale | 0.00018709 |
| | | 95% Percentile Bootstrap UCL | 0.00027682 |
| | | 95% BCA Bootstrap UCL | 0.00028257 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 6.603 | **Data appear Normal at 5% Significance Level** | |
| Theta Star | 0.0001295 | | |
| nu star | 52.83 | | |
| A-D Test Statistic | 0.192 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.657 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.657 | Mean | 0.0006583 |
| 5% K-S Critical Value | 0.394 | SD | 0.000077606 |
| **Data appear Gamma Distributed at 5% Significance Level** | | SE of Mean | 0.000013071 |
| | | 95% KM (t) UCL | 0.00068003 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.0006798 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.00074554 |
| Minimum | 0.0006208 | 95% KM (bootstrap t) UCL | 0.00067651 |
| Maximum | 0.0011 | 95% KM (BCA) UCL | 0.0011 |
| Mean | 0.0007202 | 95% KM (Percentile Bootstrap) UCL | 0.00091224 |
| Median | 0.000694 | 95% KM (Chebyshev) UCL | 0.00071527 |
| SD | 8.312E-05 | 97.5% KM (Chebyshev) UCL | 0.00073993 |
| k star | 80.86 | 99% KM (Chebyshev) UCL | 0.00078835 |
| Theta star | 0 | | |
| Nu star | 14070 | **Potential UCLs to Use** | |
| AppChi2 | 13795 | 95% KM (t) UCL | 0.00068003 |
| 95% Gamma Approximate UCL | 0.0007345 | 95% KM (Percentile Bootstrap) UCL | 0.00091224 |
| 95% Adjusted Gamma UCL | N/A | | |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_71 m,p-Xylenes

| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 52 | Number of Detected Data | 6 |
| Number of Unique Samples | 6 | Number of Non-Detect Data | 46 |
| | | Percent Non-Detects | 88.46% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.0003 | Minimum Detected | -8.112 |
| Maximum Detected | 0.13 | Maximum Detected | -2.04 |
| Mean of Detected | 0.0346 | Mean of Detected | -5.295 |
| SD of Detected | 0.0523 | SD of Detected | 2.611 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 0.63 | Maximum Non-Detect | -0.462 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 52 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.756 | Lilliefors Test Statistic | 0.873 |
| 5% Lilliefors Critical Value | 0.788 | 5% Lilliefors Critical Value | 0.788 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0174 | Mean | -6.379 |
| SD | 0.0505 | SD | 1.917 |
| 95% DL/2 (t) UCL | 0.0291 | 95% H-Stat (DL/2) UCL | 0.0405 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -7.493 |
| | | SD in Log Scale | 1.869 |
| | | Mean in Original Scale | 0.00501 |
| | | SD in Original Scale | 0.0197 |
| | | 95% Percentile Bootstrap UCL | 0.00983 |
| | | 95% BCA Bootstrap UCL | 0.0134 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 0.285 | Data appear Gamma Distributed at 5% Significance Level | |
| Theta Star | 0.121 | | |
| nu star | 3.424 | | |
| A-D Test Statistic | 0.452 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.759 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.759 | Mean | 0.00474 |
| 5% K-S Critical Value | 0.355 | SD | 0.0202 |
| Data appear Gamma Distributed at 5% Significance Level | | SE of Mean | 0.00317 |
| | | 95% KM (t) UCL | 0.0101 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.00996 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.00956 |
| Minimum | 0 | 95% KM (bootstrap t) UCL | 0.0379 |
| Maximum | 0.13 | 95% KM (BCA) UCL | 0.016 |
| Mean | 0.0316 | 95% KM (Percentile Bootstrap) UCL | 0.015 |
| Median | 0.0375 | 95% KM (Chebyshev) UCL | 0.0186 |
| SD | 0.0221 | 97.5% KM (Chebyshev) UCL | 0.0246 |
| k star | 0.398 | 99% KM (Chebyshev) UCL | 0.0363 |
| Theta star | 0.0794 | | |
| Nu star | 41.43 | **Potential UCLs to Use** | |
| AppChi2 | 27.68 | 95% KM (t) UCL | 0.0101 |
| 95% Gamma Approximate UCL | 0.0473 | | |
| 95% Adjusted Gamma UCL | 0.0479 | | |

Note: DL/2 is not a recommended method.

ProUCL — General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

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**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 52 | Number of Detected Data | 9 |
| Number of Unique Samples | 9 | Number of Non-Detect Data | 43 |
| | | Percent Non-Detects | 82.69% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.00025 | Minimum Detected | -8.294 |
| Maximum Detected | 0.081 | Maximum Detected | -2.513 |
| Mean of Detected | 0.0221 | Mean of Detected | -5.171 |
| SD of Detected | 0.0276 | SD of Detected | 2.152 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 0.63 | Maximum Non-Detect | -0.462 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 52 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.811 | Lilliefors Test Statistic | 0.89 |
| 5% Lilliefors Critical Value | 0.829 | 5% Lilliefors Critical Value | 0.829 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.019 | Mean | -6.486 |
| SD | 0.0546 | SD | 2.082 |
| 95% DL/2 (t) UCL | 0.0317 | 95% H-Stat (DL/2) UCL | 0.0643 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -8.405 |
| | | SD in Log Scale | 2.3 |
| | | Mean in Original Scale | 0.0041 |
| | | SD in Original Scale | 0.0137 |
| | | 95% Percentile Bootstrap UCL | 0.00744 |
| | | 95% BCA Bootstrap UCL | 0.0087 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
|---|---|---|---|
| k star (bias corrected) | 0.388 | Data appear Gamma Distributed at 5% Significance Level | |
| Theta Star | 0.057 | | |
| nu star | 6.987 | | |
| A-D Test Statistic | 0.489 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.776 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.776 | Mean | 0.00447 |
| 5% K-S Critical Value | 0.295 | SD | 0.0142 |
| Data appear Gamma Distributed at 5% Significance Level | | SE of Mean | 0.00218 |
| | | 95% KM (t) UCL | 0.00812 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.00805 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.00767 |
| Minimum | 0.00025 | 95% KM (bootstrap t) UCL | 0.0114 |
| Maximum | 0.289 | 95% KM (BCA) UCL | 0.0102 |
| Mean | 0.0764 | 95% KM (Percentile Bootstrap) UCL | 0.0089 |
| Median | 0.045 | 95% KM (Chebyshev) UCL | 0.014 |
| SD | 0.0776 | 97.5% KM (Chebyshev) UCL | 0.0181 |
| k star | 0.707 | 99% KM (Chebyshev) UCL | 0.0262 |
| Theta star | 0.108 | | |
| Nu star | 73.58 | Potential UCLs to Use | |
| AppChi2 | 54.82 | 95% KM (t) UCL | 0.00812 |
| 95% Gamma Approximate UCL | 0.103 | | |
| 95% Adjusted Gamma UCL | 0.103 | | |

Note: DL/2 is not a recommended method.

ProUCL

General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| User Selected Options | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

_73 Xylenes, total

**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 35 | Number of Detected Data | 2 |
| Number of Unique Samples | 2 | Number of Non-Detect Data | 33 |
| | | Percent Non-Detects | 94.29% |

| Raw Statistics | | Log-transformed Statistics | |
|---|---|---|---|
| Minimum Detected | 0.0015 | Minimum Detected | -6.502 |
| Maximum Detected | 0.075 | Maximum Detected | -2.59 |
| Mean of Detected | 0.0383 | Mean of Detected | -4.546 |
| SD of Detected | 0.052 | SD of Detected | 2.766 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 35 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| Normal Distribution Test with Detected Values Only | | Lognormal Distribution Test with Detected Values Only | |
|---|---|---|---|
| Shapiro Wilk Test Statistic | 1 | Shapiro Wilk Test Statistic | 1 |
| 5% Shapiro Wilk Critical Value | N/A | 5% Shapiro Wilk Critical Value | N/A |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |

| Assuming Normal Distribution | | Assuming Lognormal Distribution | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0341 | Mean | -6.196 |
| SD | 0.117 | SD | 2.015 |
| 95% DL/2 (t) UCL | 0.0676 | 95% H-Stat (DL/2) UCL | 0.0767 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| MLE method failed to converge properly | | Mean in Log Scale | N/A |
| | | SD in Log Scale | N/A |
| | | Mean in Original Scale | N/A |
| | | SD in Original Scale | N/A |
| | | 95% Percentile Bootstrap UCL | N/A |
| | | 95% BCA Bootstrap UCL | N/A |

| Gamma Distribution Test with Detected Values Only | | Data Distribution Test with Detected Values Only |
|---|---|---|
| k star (bias corrected) | N/A | Data do not follow a Discernable Distribution (0.05) |
| Theta Star | N/A | |
| nu star | N/A | |
| A-D Test Statistic | 0.355 | |
| 5% A-D Critical Value | N/A | |
| K-S Test Statistic | N/A | |
| 5% K-S Critical Value | N/A | |
| Data not Gamma Distributed at 5% Significance Level | | |

| Assuming Gamma Distribution | | Nonparametric Statistics | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | N/A | Mean | 0.0038 |
| Maximum | N/A | SD | 0.0128 |
| Mean | N/A | SE of Mean | 0.0032 |
| Median | N/A | 95% KM (t) UCL | 0.0092 |
| SD | N/A | 95% KM (z) UCL | 0.00906 |
| k star | N/A | 95% KM (jackknife) UCL | 0.0517 |
| Theta star | N/A | 95% KM (bootstrap t) UCL | 0.00406 |
| Nu star | N/A | 95% KM (BCA) UCL | 0.075 |
| AppChi2 | N/A | 95% KM (Percentile Bootstrap) UCL | 0.075 |
| 95% Gamma Approximate UCL | N/A | 95% KM (Chebyshev) UCL | 0.0177 |
| 95% Adjusted Gamma UCL | N/A | 97.5% KM (Chebyshev) UCL | 0.0238 |
| | | 99% KM (Chebyshev) UCL | 0.0356 |
| | | Potential UCLs to Use | |
| | | 99% KM (Chebyshev) UCL | 0.0356 |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

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| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 88 | Number of Detected Data | 54 |
| Number of Unique Samples | 45 | Number of Non-Detect Data | 34 |
| | | Percent Non-Detects | 38.64% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.0004 | Minimum Detected | -7.824 |
| Maximum Detected | 0.048 | Maximum Detected | -3.037 |
| Mean of Detected | 0.0116 | Mean of Detected | -5.118 |
| SD of Detected | 0.0124 | SD of Detected | 1.245 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 88 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.247 | Lilliefors Test Statistic | 0.111 |
| 5% Lilliefors Critical Value | 0.121 | 5% Lilliefors Critical Value | 0.121 |
| Data not Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.03 | Mean | -5.059 |
| SD | 0.0838 | SD | 1.663 |
| 95% DL/2 (t) UCL | 0.0448 | 95% H-Stat (DL/2) UCL | 0.0909 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -5.607 |
| | | SD in Log Scale | 1.303 |
| | | Mean in Original Scale | 0.00811 |
| | | SD in Original Scale | 0.0108 |
| | | 95% Percentile Bootstrap UCL | 0.0101 |
| | | 95% BCA Bootstrap UCL | 0.0102 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 0.85 | Data appear Lognormal at 5% Significance Level | |
| Theta Star | 0.0136 | | |
| nu star | 91.77 | | |
| A-D Test Statistic | 1.38 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.786 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.786 | Mean | 0.00868 |
| 5% K-S Critical Value | 0.125 | SD | 0.0113 |
| Data not Gamma Distributed at 5% Significance Level | | SE of Mean | 0.0013 |
| | | 95% KM (t) UCL | 0.0108 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.0108 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.0108 |
| Minimum | 0.0004 | 95% KM (bootstrap t) UCL | 0.0111 |
| Maximum | 0.048 | 95% KM (BCA) UCL | 0.011 |
| Mean | 0.0112 | 95% KM (Percentile Bootstrap) UCL | 0.0109 |
| Median | 0.00677 | 95% KM (Chebyshev) UCL | 0.0144 |
| SD | 0.0104 | 97.5% KM (Chebyshev) UCL | 0.0168 |
| k star | 1.141 | 99% KM (Chebyshev) UCL | 0.0217 |
| Theta star | 0.00985 | | |
| Nu star | 200.8 | **Potential UCLs to Use** | |
| AppChi2 | 169 | 95% KM (Chebyshev) UCL | 0.0144 |
| 95% Gamma Approximate UCL | 0.0134 | | |
| 95% Adjusted Gamma UCL | 0.0134 | | |

Note: DL/2 is not a recommended method.

ProUCL General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

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**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 52 | Number of Detected Data | 5 |
| Number of Unique Samples | 5 | Number of Non-Detect Data | 47 |
| | | Percent Non-Detects | 90.38% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.00035 | Minimum Detected | -7.958 |
| Maximum Detected | 0.0012 | Maximum Detected | -6.725 |
| Mean of Detected | 0.00065 | Mean of Detected | -7.433 |
| SD of Detected | 0.0003344 | SD of Detected | 0.473 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 0.63 | Maximum Non-Detect | -0.462 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 52 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.881 | Lilliefors Test Statistic | 0.969 |
| 5% Lilliefors Critical Value | 0.762 | 5% Lilliefors Critical Value | 0.762 |
| **Data appear Normal at 5% Significance Level** | | **Data appear Lognormal at 5% Significance Level** | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0186 | Mean | -6.625 |
| SD | 0.0552 | SD | 2.037 |
| 95% DL/2 (t) UCL | 0.0314 | 95% H-Stat (DL/2) UCL | 0.0536 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -7.808 |
| | | SD in Log Scale | 0.326 |
| | | Mean in Original Scale | 0.00042958 |
| | | SD in Original Scale | 0.00016047 |
| | | 95% Percentile Bootstrap UCL | 0.0004664 |
| | | 95% BCA Bootstrap UCL | 0.0004733 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 2.321 | **Data appear Normal at 5% Significance Level** |
| Theta Star | 0.0002801 | |
| nu star | 23.21 | |
| A-D Test Statistic | 0.266 | |
| 5% A-D Critical Value | 0.681 | |
| K-S Test Statistic | 0.681 | |
| 5% K-S Critical Value | 0.358 | |
| **Data appear Gamma Distributed at 5% Significance Level** | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0.0003486 | Mean | 0.00044269 |
| Maximum | 0.0012 | SD | 0.00015712 |
| Mean | 0.0005346 | SE of Mean | 0.000044133 |
| Median | 0.0004954 | 95% KM (t) UCL | 0.00051662 |
| SD | 0.0001482 | 95% KM (z) UCL | 0.00051528 |
| k star | 14.98 | 95% KM (jackknife) UCL | 0.00054586 |
| Theta star | 3.569E-05 | 95% KM (bootstrap t) UCL | 0.00052369 |
| Nu star | 1558 | 95% KM (BCA) UCL | 0.0007 |
| AppChi2 | 1467 | 95% KM (Percentile Bootstrap) UCL | 0.00062225 |
| 95% Gamma Approximate UCL | 0.0005676 | 95% KM (Chebyshev) UCL | 0.00063506 |
| 95% Adjusted Gamma UCL | 0.0005686 | 97.5% KM (Chebyshev) UCL | 0.0007183 |
| | | 99% KM (Chebyshev) UCL | 0.00088181 |
| | | **Potential UCLs to Use** | |
| | | 95% KM (t) UCL | 0.00051662 |
| | | 95% KM (Percentile Bootstrap) UCL | 0.00062225 |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

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| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 52 | Number of Detected Data | 5 |
| Number of Unique Samples | 4 | Number of Non-Detect Data | 47 |
| | | Percent Non-Detects | 90.38% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.00029 | Minimum Detected | -8.146 |
| Maximum Detected | 0.00086 | Maximum Detected | -7.059 |
| Mean of Detected | 0.00053 | Mean of Detected | -7.623 |
| SD of Detected | 0.0002394 | SD of Detected | 0.448 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 0.63 | Maximum Non-Detect | -0.462 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 52 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.888 | Lilliefors Test Statistic | 0.918 |
| 5% Lilliefors Critical Value | 0.762 | 5% Lilliefors Critical Value | 0.762 |
| **Data appear Normal at 5% Significance Level** | | **Data appear Lognormal at 5% Significance Level** | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0167 | Mean | -6.745 |
| SD | 0.054 | SD | 1.954 |
| 95% DL/2 (t) UCL | 0.0292 | 95% H-Stat (DL/2) UCL | 0.0377 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -7.855 |
| | | SD in Log Scale | 0.314 |
| | | Mean in Original Scale | 0.00040726 |
| | | SD in Original Scale | 0.00013408 |
| | | 95% Percentile Bootstrap UCL | 0.00044019 |
| | | 95% BCA Bootstrap UCL | 0.00044182 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 2.676 | **Data appear Normal at 5% Significance Level** | |
| Theta Star | 0.0001981 | | |
| nu star | 26.76 | | |
| A-D Test Statistic | 0.392 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.68 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.68 | Mean | 0.000405 |
| 5% K-S Critical Value | 0.358 | SD | 0.00013669 |
| **Data appear Gamma Distributed at 5% Significance Level** | | SE of Mean | 0.000043864 |
| | | 95% KM (t) UCL | 0.00047848 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.00047715 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.00048821 |
| Minimum | 0.000222 | 95% KM (bootstrap t) UCL | 0.00048788 |
| Maximum | 0.00086 | 95% KM (BCA) UCL | 0.00070842 |
| Mean | 0.0004295 | 95% KM (Percentile Bootstrap) UCL | 0.00049818 |
| Median | 0.0003916 | 95% KM (Chebyshev) UCL | 0.0005962 |
| SD | 0.0001437 | 97.5% KM (Chebyshev) UCL | 0.00067893 |
| k star | 9.294 | 99% KM (Chebyshev) UCL | 0.00084144 |
| Theta star | 4.622E-05 | | |
| Nu star | 966.5 | **Potential UCLs to Use** | |
| AppChi2 | 895.4 | 95% KM (t) UCL | 0.00047848 |
| 95% Gamma Approximate UCL | 0.0004637 | 95% KM (Percentile Bootstrap) UCL | 0.00049818 |
| 95% Adjusted Gamma UCL | 0.0004647 | | |

Note: DL/2 is not a recommended method.

ProUCL | General UCL Statistics for Data Sets with Non-Detects

| | | | |
|---|---|---|---|
| User Selected Options | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

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| | | | |
|---|---|---|---|
| **General Statistics** | | | |
| Number of Valid Samples | 52 | Number of Detected Data | 4 |
| Number of Unique Samples | 4 | Number of Non-Detect Data | 48 |
| | | Percent Non-Detects | 92.31% |
| **Raw Statistics** | | **Log-transformed Statistics** | |
| Minimum Detected | 0.00026 | Minimum Detected | -8.255 |
| Maximum Detected | 0.00039 | Maximum Detected | -7.849 |
| Mean of Detected | 0.00031 | Mean of Detected | -8.09 |
| SD of Detected | 5.598E-05 | SD of Detected | 0.172 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 0.63 | Maximum Non-Detect | -0.462 |
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 52 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |
| **UCL Statistics** | | | |
| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
| Lilliefors Test Statistic | 0.881 | Lilliefors Test Statistic | 0.912 |
| 5% Lilliefors Critical Value | 0.748 | 5% Lilliefors Critical Value | 0.748 |
| Data appear Normal at 5% Significance Level | | Data appear Lognormal at 5% Significance Level | |
| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0128 | Mean | -6.922 |
| SD | 0.0474 | SD | 1.848 |
| 95% DL/2 (t) UCL | 0.0238 | 95% H-Stat (DL/2) UCL | 0.0215 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -8.09 |
| | | SD in Log Scale | 0.173 |
| | | Mean in Original Scale | 0.00031102 |
| | | SD in Original Scale | 0.000054205 |
| | | 95% Percentile Bootstrap UCL | 0.00032357 |
| | | 95% BCA Bootstrap UCL | 0.00032377 |
| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** | |
| k star (bias corrected) | 11.13 | Data appear Normal at 5% Significance Level | |
| Theta Star | 2.786E-05 | | |
| nu star | 89.01 | | |
| A-D Test Statistic | 0.385 | **Nonparametric Statistics** | |
| 5% A-D Critical Value | 0.656 | Kaplan-Meier (KM) Method | |
| K-S Test Statistic | 0.656 | Mean | 0.00031 |
| 5% K-S Critical Value | 0.394 | SD | 0.000048477 |
| Data appear Gamma Distributed at 5% Significance Level | | SE of Mean | 0.000027988 |
| | | 95% KM (t) UCL | 0.00035689 |
| **Assuming Gamma Distribution** | | 95% KM (z) UCL | 0.00035604 |
| Gamma ROS Statistics using Extrapolated Data | | 95% KM (jackknife) UCL | 0.00036362 |
| Minimum | 0.0001678 | 95% KM (bootstrap t) UCL | 0.00044994 |
| Maximum | 0.00039 | 95% KM (BCA) UCL | 0.00036 |
| Mean | 0.0003068 | 95% KM (Percentile Bootstrap) UCL | 0.00039 |
| Median | 0.0003177 | 95% KM (Chebyshev) UCL | 0.000432 |
| SD | 5.268E-05 | 97.5% KM (Chebyshev) UCL | 0.00048479 |
| k star | 28.68 | 99% KM (Chebyshev) UCL | 0.00058848 |
| Theta star | 1.07E-05 | | |
| Nu star | 2983 | **Potential UCLs to Use** | |
| AppChi2 | 2857 | 95% KM (t) UCL | 0.00035689 |
| 95% Gamma Approximate UCL | 0.0003203 | 95% KM (Percentile Bootstrap) UCL | 0.00039 |
| 95% Adjusted Gamma UCL | N/A | | |

Note: DL/2 is not a recommended method.

| | | | |
|---|---|---|---|
| **User Selected Options** | 99 | | 99 |
| From File | | C:\lhilsche\Omega\EPCs7\all1.wst | |
| Full Precision | | OFF | |
| Confidence Coefficient | | 95% | |
| Number of Bootstrap Operations | | 2000 | |

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**General Statistics**

| | | | |
|---|---|---|---|
| Number of Valid Samples | 87 | Number of Detected Data | 50 |
| Number of Unique Samples | 40 | Number of Non-Detect Data | 37 |
| | | Percent Non-Detects | 42.53% |

| **Raw Statistics** | | **Log-transformed Statistics** | |
|---|---|---|---|
| Minimum Detected | 0.00025 | Minimum Detected | -8.294 |
| Maximum Detected | 0.13 | Maximum Detected | -2.04 |
| Mean of Detected | 0.0176 | Mean of Detected | -5.806 |
| SD of Detected | 0.0342 | SD of Detected | 1.87 |
| Minimum Non-Detect | 0.0005 | Minimum Non-Detect | -7.601 |
| Maximum Non-Detect | 1 | Maximum Non-Detect | 0 |

| | | | |
|---|---|---|---|
| Note: Data have multiple DLs - Use of KM Method is recommended | | Number treated as Non-Detect | 87 |
| For all methods (except KM, DL/2, and ROS Methods), | | Number treated as Detected | 0 |
| Observations < Largest ND are treated as NDs | | Single DL Non-Detect Percentage | 100.00% |

**UCL Statistics**

| **Normal Distribution Test with Detected Values Only** | | **Lognormal Distribution Test with Detected Values Only** | |
|---|---|---|---|
| Lilliefors Test Statistic | 0.555 | Lilliefors Test Statistic | 0.889 |
| 5% Lilliefors Critical Value | 0.947 | 5% Lilliefors Critical Value | 0.947 |
| Data not Normal at 5% Significance Level | | Data not Lognormal at 5% Significance Level | |

| **Assuming Normal Distribution** | | **Assuming Lognormal Distribution** | |
|---|---|---|---|
| DL/2 Substitution Method | | DL/2 Substitution Method | |
| Mean | 0.0308 | Mean | -5.675 |
| SD | 0.0869 | SD | 1.934 |
| 95% DL/2 (t) UCL | 0.0463 | 95% H-Stat (DL/2) UCL | 0.107 |
| Maximum Likelihood Estimate(MLE) Method | N/A | Log ROS Method | |
| **MLE method failed to converge properly** | | Mean in Log Scale | -6.321 |
| | | SD in Log Scale | 1.671 |
| | | Mean in Original Scale | 0.0107 |
| | | SD in Original Scale | 0.0271 |
| | | 95% Percentile Bootstrap UCL | 0.0157 |
| | | 95% BCA Bootstrap UCL | 0.0164 |

| **Gamma Distribution Test with Detected Values Only** | | **Data Distribution Test with Detected Values Only** |
|---|---|---|
| k star (bias corrected) | 0.367 | **Data do not follow a Discernable Distribution (0.05)** |
| Theta Star | 0.0481 | |
| nu star | 36.67 | |
| A-D Test Statistic | 4.278 | |
| 5% A-D Critical Value | 0.844 | |
| K-S Test Statistic | 0.844 | |
| 5% K-S Critical Value | 0.135 | |
| Data not Gamma Distributed at 5% Significance Level | | |

| **Assuming Gamma Distribution** | | **Nonparametric Statistics** | |
|---|---|---|---|
| Gamma ROS Statistics using Extrapolated Data | | Kaplan-Meier (KM) Method | |
| Minimum | 0.00025 | Mean | 0.0113 |
| Maximum | 0.13 | SD | 0.0278 |
| Mean | 0.0171 | SE of Mean | 0.00313 |
| Median | 0.00944 | 95% KM (t) UCL | 0.0165 |
| SD | 0.0264 | 95% KM (z) UCL | 0.0164 |
| k star | 0.574 | 95% KM (jackknife) UCL | 0.0165 |
| Theta star | 0.0298 | 95% KM (bootstrap t) UCL | 0.0182 |
| Nu star | 99.87 | 95% KM (BCA) UCL | 0.0167 |
| AppChi2 | 77.81 | 95% KM (Percentile Bootstrap) UCL | 0.0169 |
| 95% Gamma Approximate UCL | 0.0219 | 95% KM (Chebyshev) UCL | 0.0249 |
| 95% Adjusted Gamma UCL | 0.022 | 97.5% KM (Chebyshev) UCL | 0.0308 |
| Note: DL/2 is not a recommended method. | | 99% KM (Chebyshev) UCL | 0.0424 |
| | | **Potential UCLs to Use** | |
| | | 97.5% KM (Chebyshev) UCL | 0.0308 |

# Appendix B
# Screening-Level Soil Gas Risk Evaluation

## Appendix B – Screening-Level Soil Gas Risk Evaluation

- Cancer Risk and Non-cancer Hazard Calculations and Summary Tables
- Soil Gas Data
- Groundwater Hydropunch Data
- Johnson and Ettinger Model Input/Output Files

# Cancer Risk and Non-cancer Hazard Calculations and Summary Tables

**Table B-1**
**Soil, and Building Parameters Used in the Johnson and Ettinger Model**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Parameter | Description | Selected Value | Notes |
|---|---|---|---|
| Depth below grade to bottom of enclosed space floor | This is the depth from soil surface to the bottom of the floor in contact with soil | 15 cm | Default value in User's Guide for slab-on-grade construction (EPA, 2000). Represents 6 inch thick concrete slab |
| Depth below grade to Top of Contamination | This is the depth from soil surface to the top of VOD-contaminated soil. It represents the depth of a VOC contaminant source in soil, or the "dry zone" between the surface and VOC contaminant source | Sample specific | Selected value is based on sample collection depth for the soil gas sample. |
| Average soil temperature | Average soil temperature | $22^0$ C. | Groundwater and subsurface default soil temperatures obtained from DTSC SL_ and GW_Screen. |
| Soil Stratum SCS soil type | A parameter associated with convective transport of vapors within the zone of influence of a building. It is related to the size and shape of connected soil pores | Sample specific | See Tables 2-1 to 2-12 |
| Vadose Zone Soil Dry Bulk Density | Weight of soil per unit volume given on an oven-dry basis | Sample specific | See Tables 2-1 to 2-12 |
| Vadose Zone Total Porosity | Used with water-filled porosity to calculate air-filled porosity (see below) | Sample specific | See Tables 2-1 to 2-12 |
| Vadose Zone Water-filled porosity | Used with total porosity to calculate air-filled porosity (see above) | Sample specific | See Tables 2-1 to 2-12 |

**Table B-2**
**Soil Physical Properties**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Soil Sample Number | Depth (ft bgs) | Soil Bulk Density ($g/cm^3$) | Total Porosity ($cm^3/cm^3$) | Water-Filled Porosity ($cm^3/cm^3$) | Air-Filled Porosity ($cm^3/cm^3$) | SCS Soil Type |
|---|---|---|---|---|---|---|
| OC2-SSRA1A-S-0-295 | 11.5-12 | 1.61 | 0.382 | 0.244 | 0.138 | Silty Clay Loam (SICL) |
| OC2-SSRA1B-S-0-296 | 18.5-19 | 1.63 | 0.379 | 0.294 | 0.085 | Silty Clay Loam (SICL) |
| OC2-SSRA1C-S-0-297 | 28.5-29 | 1.67 | 0.383 | 0.277 | 0.106 | Silty Clay Loam (SICL) |
| OC2-SSRA2A-S-0-292 | 7-7.5 | 1.62 | 0.381 | 0.276 | 0.104 | Silty Clay Loam (SICL) |
| OC2-SSRA2B-S-0-293 | 12.5-13 | 1.54 | 0.408 | 0.304 | 0.104 | Silty Clay Loam (SICL) |
| OC2-SSRA2C-S-0-294 | 28.5-29 | 1.82 | 0.312 | 0.272 | 0.040 | Silty Clay Loam (SICL) |
| OC2-SSRA3A-S-0-289 | 12-12.5 | 1.57 | 0.397 | 0.324 | 0.073 | Silt Loam (SIL) |
| OC2-SSRA3B-S-0-290 | 18.5-19 | 1.66 | 0.368 | 0.307 | 0.060 | Silty Clay Loam (SICL) |
| OC2-SSRA3C-S-0-291 | 28.5-29 | 1.80 | 0.324 | 0.250 | 0.073 | Loam (L) |
| OC2-SSRA4A-S-0-286 | 11-11.5 | 1.63 | 0.381 | 0.304 | 0.077 | Silt Loam (SIL) |
| OC2-SSRA4A-S-0-287 | 18-18.5 | 1.65 | 0.373 | 0.152 | 0.221 | Silt Loam (SIL) |
| OC2-SSRA4A-S-0-288 | 32-32.5 | 1.56 | 0.424 | 0.279 | 0.145 | Loam (L) |

**Table B-3**
**Volatile Organic Compound (VOC) Soil Gas Concentrations Used in Johnson and Ettinger Vapor Intrusion Modeling**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Soil Gas Sampling Location | Depth of Soil Gas Sample (ft bgs) | Volatile Organic Compounds ($\mu g/m^3$) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | Chloroform | Ethylbenzene | Tetrachloroethene (PCE) | Toluene | Trichloroethene (TCE) | Trichlorofluoromethane (Freon11) | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon113) | 1,2,4-Trimethylbenzene | 1,3,5-Trimethylbenzene | m,p-Xylene | o-Xylene |
| SGRA-1 | 12.5-13 | 23.6 | 68.3 | 35.1 | 21.0 | 131.8 | --- | --- | --- | 38.3 | 21.6 | 125.8 | 34.7 |
| | 21.5-22 | 27.1 | 26.3 | 23.4 | 35.9 | 79.1 | --- | --- | --- | 24.1 | 23.1 | 47.7 | 29.1 |
| | 31.5-32 | 22.0 | --- | 33.0 | 325.3 | 113.0 | 150.3 | --- | 63.6 | 38.3 | 19.2 | 121.5 | 29.5 |
| SGRA-1 (field duplicate) | 12.5-13 | 26.8 | 78.1 | 41.6 | 25.8 | 150.6 | --- | --- | --- | 48.1 | 28 | 151.8 | 41.6 |
| SGRA-2 | 7-7.5 | 4.1 | 175.6 | 10 | 29.8 | 23.3 | --- | --- | --- | 20.1 | 8.3 | 36 | 12.1 |
| | 12.5-13 | 8.3 | 117.1 | 23.9 | 29.8 | 67.8 | --- | --- | --- | 41.7 | 18.7 | 91.1 | 28.2 |
| | 28.5-29 | 4.1 | 58.5 | 13.9 | 33.9 | 24.1 | --- | --- | --- | 15.2 | 7.4 | 52.1 | 15.2 |
| SGRA-3 | 11.5-12 | 16.6 | 122 | 32.1 | 23.7 | 124.3 | --- | --- | --- | 19.2 | 9.3 | 112.8 | 28.2 |
| | 18.5-19 | 19.8 | 53.7 | 52.1 | 12.9 | 94.1 | --- | --- | --- | 132.6 | 68.8 | 169.2 | 82.4 |
| | 28.5-29 | 28.4 | 20 | 28.2 | 50.8 | 143.1 | --- | --- | --- | --- | --- | 95.4 | 25.6 |
| SGRA-4 | 10.5-11 | 4.8 | 12.7 | 12.1 | 122 | 33.9 | 12.3 | 6.7 | 46.7 | 13.3 | 6.9 | 42.5 | 12.6 |
| | 18-18.5 | 24.3 | 31.2 | 35.1 | 61.7 | 139.3 | --- | --- | 107.2 | 30.9 | 20.1 | 112.8 | 36.4 |
| | 30.5-31 | --- | --- | --- | 155.9 | 146.9 | 64.4 | --- | 359.9 | --- | --- | 160.5 | --- |
| SGRA-4 (field duplicate) | 10.5-11 | 3.8 | 9.8 | 9.5 | 108.4 | 26.7 | 8.1 | --- | 36.8 | 10.8 | --- | 33.8 | 10.4 |

Notes:

"---" = Not Detected

**Table B-4**
**Estimated Cancer Risks, Soil Gas Sampling Location SGRA-1 at 12.5 ft, 21.5 ft and 31.5 ft bgs**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Sample Location | Soil Gas Sample Depth (ft bgs) | VOC | VOC Soil Gas Concentration ($\mu g/m^3$) | Estimated Cancer Risk (J&E Model) |
|---|---|---|---|---|
| SGRA-1 | 12.5-13 | Benzene | 26.8 | 4.10E-08 |
| | | Chloroform | 78.1 | 1.10E-07 |
| | | Ethylbenzene | 41.6 | 4.70E-09 |
| | | Tetrachloroethene (PCE) | 25.8 | 6.70E-09 |
| | | Toluene | 150.6 | NA |
| | | 1,2,4-Trimethylbenzene | 48.1 | NA |
| | | 1,3,5-Trimethylbenzene | 28.0 | NA |
| | | p-Xylene | 151.8 | NA |
| | | o-Xylene | 41.6 | NA |
| | | | **Total** | **1.6E-07** |
| SGRA-1 | 21.5-22 | Benzene | 27.1 | 5.10E-09 |
| | | Chloroform | 26.3 | 4.70E-09 |
| | | Ethylbenzene | 23.4 | 3.20E-10 |
| | | Tetrachloroethene (PCE) | 35.9 | 1.10E-09 |
| | | Toluene | 79.1 | NA |
| | | 1,2,4-Trimethylbenzene | 24.1 | NA |
| | | 1,3,5-Trimethylbenzene | 23.1 | NA |
| | | p-Xylene | 47.7 | NA |
| | | o-Xylene | 29.1 | NA |
| | | | **Total** | **1.1E-08** |
| SGRA-1 | 31.5-32 | Benzene | 22.0 | 5.60E-09 |
| | | Ethylbenzene | 33.0 | 6.20E-10 |
| | | Tetrachloroethene (PCE) | 325.3 | 1.40E-08 |
| | | Toluene | 113.0 | NA |
| | | Trichloroethene (TCE) | 150.3 | 2.40E-09 |
| | | Freon 113 | 63.6 | NA |
| | | 1,2,4-Trimethylbenzene | 38.3 | NA |
| | | 1,3,5-Trimethylbenzene | 19.2 | NA |
| | | p-Xylene | 121.5 | NA |
| | | o-Xylene | 29.5 | NA |
| | | | **Total** | **2.3E-08** |

Notes:
For depth of 12.5-13 ft maximum concentration comparing primary/duplicate samples was used in risk estimation

**Table B-5**
**Estimated Cancer Risks, Soil Gas Sampling Location SGRA-2 at 7 ft, 12.5 ft and 28.5 ft bgs**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Sample Location | Soil Gas Sample Depth (ft bgs) | VOC | VOC Soil Gas Concentration ($\mu g/m^3$) | Estimated Cancer Risk (J&E Model) |
|---|---|---|---|---|
| SGRA-2 | 7-7.5 | Benzene | 4.1 | 4.80E-09 |
| | | Chloroform | 175.6 | 1.90E-07 |
| | | Ethylbenzene | 10.0 | 8.60E-10 |
| | | Tetrachloroethene (PCE) | 29.8 | 5.80E-09 |
| | | Toluene | 23.3 | NA |
| | | 1,2,4-Trimethylbenzene | 20.1 | NA |
| | | 1,3,5-Trimethylbenzene | 8.3 | NA |
| | | p-Xylene | 36.0 | NA |
| | | o-Xylene | 12.1 | NA |
| | | | **Total** | **2.0E-07** |
| SGRA-2 | 12.5-13 | Benzene | 8.3 | 4.50E-09 |
| | | Chloroform | 117.1 | 6.00E-08 |
| | | Ethylbenzene | 23.9 | 9.60E-10 |
| | | Tetrachloroethene (PCE) | 29.8 | 2.70E-09 |
| | | Toluene | 67.8 | NA |
| | | 1,2,4-Trimethylbenzene | 41.7 | NA |
| | | 1,3,5-Trimethylbenzene | 18.7 | NA |
| | | p-Xylene | 91.1 | NA |
| | | o-Xylene | 28.2 | NA |
| | | | **Total** | **6.8E-08** |
| SGRA-2 | 28.5-29 | Benzene | 4.1 | 9.00E-11 |
| | | Chloroform | 58.5 | 1.30E-09 |
| | | Ethylbenzene | 13.9 | 2.10E-11 |
| | | Tetrachloroethene (PCE) | 33.9 | 1.00E-10 |
| | | Toluene | 24.1 | NA |
| | | 1,2,4-Trimethylbenzene | 15.2 | NA |
| | | 1,3,5-Trimethylbenzene | 7.4 | NA |
| | | p-Xylene | 52.1 | NA |
| | | o-Xylene | 15.2 | NA |
| | | | **Total** | **1.5E-09** |

**Table B-6**
**Estimated Cancer Risks, Soil Gas Sampling Location SGRA-3 at 11.5 ft, 18.5 ft and 28.5 ft bgs**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Sample Location | Soil Gas Sample Depth (ft bgs) | VOC | VOC Soil Gas Concentration (µg/m3) | Estimated Cancer Risk (J&E Model) |
|---|---|---|---|---|
| SGRA-3 | 11.5-12 | Benzene | 16.6 | 3.40E-09 |
| | | Chloroform | 122.0 | 2.40E-08 |
| | | Ethylbenzene | 32.1 | 4.80E-10 |
| | | Tetrachloroethene (PCE) | 23.7 | 7.70E-10 |
| | | Toluene | 124.3 | NA |
| | | 1,2,4-Trimethylbenzene | 19.2 | NA |
| | | 1,3,5-Trimethylbenzene | 9.3 | NA |
| | | p-Xylene | 112.8 | NA |
| | | o-Xylene | 28.2 | NA |
| | | | **Total** | **2.9E-08** |
| SGRA-3 | 18.5-19 | Benzene | 19.8 | 1.70E-09 |
| | | Chloroform | 53.7 | 4.40E-09 |
| | | Ethylbenzene | 52.1 | 3.10E-10 |
| | | Tetrachloroethene (PCE) | 12.9 | 1.70E-10 |
| | | Toluene | 94.1 | NA |
| | | 1,2,4-Trimethylbenzene | 132.6 | NA |
| | | 1,3,5-Trimethylbenzene | 68.8 | NA |
| | | p-Xylene | 169.2 | NA |
| | | o-Xylene | 82.4 | NA |
| | | | **Total** | **6.6E-09** |
| SGRA-3 | 28.5-29 | Benzene | 28.4 | 3.50E-09 |
| | | Chloroform | 20.0 | 2.30E-09 |
| | | Ethylbenzene | 28.2 | 2.50E-10 |
| | | Tetrachloroethene (PCE) | 50.8 | 1.00E-09 |
| | | Toluene | 143.1 | NA |
| | | p-Xylene | 95.4 | NA |
| | | o-Xylene | 25.6 | NA |
| | | | **Total** | **7.1E-09** |

**Table B-7**
**Estimated Cancer Risks, Soil Gas Sampling Location SGRA-4 at 10.5 ft, 18ft, and 30.5 ft bgs**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Sample Location | Soil Gas Sample Depth (ft bgs) | VOC | VOC Soil Gas Concentration ($\mu g/m^3$) | Estimated Cancer Risk (J&E Model) |
|---|---|---|---|---|
| SGRA-4 | 10.5-11 | Benzene | 4.8 | 1.40E-09 |
| | | Chloroform | 12.7 | 3.50E-09 |
| | | Ethylbenzene | 12.1 | 2.50E-10 |
| | | Tetrachloroethene (PCE) | 122.0 | 5.60E-09 |
| | | Toluene | 33.9 | NA |
| | | Trichloroethene (TCE) | 12.3 | 2.10E-10 |
| | | Freon 11 | 6.7 | NA |
| | | Freon 113 | 46.7 | NA |
| | | 1,2,4-Trimethylbenzene | 13.3 | NA |
| | | 1,3,5-Trimethylbenzene | 6.9 | NA |
| | | p-Xylene | 42.5 | NA |
| | | o-Xylene | 12.6 | NA |
| | | | **Total** | **1.1E-08** |
| SGRA-4 | 18-18.5 | Benzene | 24.3 | 1.20E-07 |
| | | Chloroform | 31.2 | 1.40E-07 |
| | | Ethylbenzene | 35.1 | 1.30E-08 |
| | | Tetrachloroethene (PCE) | 61.7 | 5.20E-08 |
| | | Toluene | 139.3 | NA |
| | | Freon 113 | 107.2 | NA |
| | | 1,2,4-Trimethylbenzene | 30.9 | NA |
| | | 1,3,5-Trimethylbenzene | 20.1 | NA |
| | | p-Xylene | 112.8 | NA |
| | | o-Xylene | 36.4 | NA |
| | | | **Total** | **3.3E-07** |
| SGRA-4 | 30.5-31 | Tetrachloroethene (PCE) | 155.9 | 1.60E-08 |
| | | Toluene | 146.9 | NA |
| | | Trichloroethene (TCE) | 64.4 | 2.40E-09 |
| | | Freon 113 | 359.9 | NA |
| | | p-Xylene | 160.5 | NA |
| | | | **Total** | **1.8E-08** |

Notes:
For depth of 10.5-11 ft bgs maximum concentration comparing primary/duplicate samples was used in risk estimation

**Table B-8**
**Estimated Non-cancer Hazard Quotient, Soil Gas Sampling Location SGRA-1 at 12.5 ft, 21.5 ft and 31.5 ft bgs**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Sample Location | Soil Gas Sample Depth (ft bgs) | VOC | VOC Soil Gas Concentration ($\mu g/m^3$) | Estimated Hazard Quotient (J&E Model) |
|---|---|---|---|---|
| SGRA-1 | 12.5-13 | Benzene | 26.8 | 1.10E-04 |
| | | Chloroform | 78.1 | 3.80E-05 |
| | | Ethylbenzene | 41.6 | 4.40E-06 |
| | | Tetrachloroethene (PCE) | 25.8 | 7.50E-05 |
| | | Toluene | 150.6 | 6.20E-05 |
| | | 1,2,4-Trimethylbenzene | 48.1 | 7.00E-04 |
| | | 1,3,5-Trimethylbenzene | 28.0 | 4.00E-04 |
| | | p-Xylene | 151.8 | 1.70E-04 |
| | | o-Xylene | 41.6 | 5.10E-05 |
| | | | **Total** | **1.6E-03** |
| SGRA-1 | 21.5-22 | Benzene | 27.1 | 1.40E-05 |
| | | Chloroform | 26.3 | 1.60E-06 |
| | | Ethylbenzene | 23.4 | 3.00E-07 |
| | | Tetrachloroethene (PCE) | 35.9 | 1.20E-05 |
| | | Toluene | 79.1 | 3.90E-06 |
| | | 1,2,4-Trimethylbenzene | 24.1 | 4.30E-05 |
| | | 1,3,5-Trimethylbenzene | 23.1 | 4.10E-05 |
| | | p-Xylene | 47.7 | 6.30E-06 |
| | | o-Xylene | 29.1 | 4.40E-06 |
| | | | **Total** | **1.3E-04** |
| SGRA-1 | 31.5-32 | Benzene | 22.0 | 1.50E-05 |
| | | Ethylbenzene | 33.0 | 5.80E-07 |
| | | Tetrachloroethene (PCE) | 325.3 | 1.60E-04 |
| | | Toluene | 113.0 | 7.60E-06 |
| | | Trichloroethene (TCE) | 150.3 | 4.60E-06 |
| | | Freon 113 | 63.6 | 3.80E-08 |
| | | 1,2,4-Trimethylbenzene | 38.3 | 9.20E-05 |
| | | 1,3,5-Trimethylbenzene | 19.2 | 4.60E-05 |
| | | p-Xylene | 121.5 | 2.20E-05 |
| | | o-Xylene | 29.5 | 6.00E-06 |
| | | | **Total** | **3.5E-04** |

Notes:
For depth of 12.5-13 ft maximum concentration comparing primary/duplicate samples was used in HQ estimation

**Table B-9**
**Estimated Non-cancer Hazard Quotients, Soil Gas Sampling Location SGRA-2 at 7 ft, 12.5 ft and 28.5 ft bgs**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Sample Location | Soil Gas Sample Depth (ft bgs) | VOC | VOC Soil Gas Concentration ($\mu g/m^3$) | Estimated Hazard Quotient (J&E Model) |
|---|---|---|---|---|
| SGRA-2 | 7-7.5 | Benzene | 4.1 | 1.30E-05 |
| | | Chloroform | 175.6 | 6.60E-05 |
| | | Ethylbenzene | 10.0 | 8.10E-07 |
| | | Tetrachloroethene (PCE) | 29.8 | 6.60E-05 |
| | | Toluene | 23.3 | 7.30E-06 |
| | | 1,2,4-Trimethylbenzene | 20.1 | 2.20E-04 |
| | | 1,3,5-Trimethylbenzene | 8.3 | 9.10E-05 |
| | | p-Xylene | 36.0 | 3.00E-05 |
| | | o-Xylene | 12.1 | 1.10E-05 |
| | | | **Total** | **5.1E-04** |
| SGRA-2 | 12.5-13 | Benzene | 8.3 | 1.20E-05 |
| | | Chloroform | 117.1 | 2.00E-05 |
| | | Ethylbenzene | 23.9 | 8.90E-07 |
| | | Tetrachloroethene (PCE) | 29.8 | 3.00E-05 |
| | | Toluene | 67.8 | 9.80E-06 |
| | | 1,2,4-Trimethylbenzene | 41.7 | 2.10E-04 |
| | | 1,3,5-Trimethylbenzene | 18.7 | 9.50E-05 |
| | | p-Xylene | 91.1 | 3.50E-05 |
| | | o-Xylene | 28.2 | 1.20E-05 |
| | | | **Total** | **4.2E-04** |
| SGRA-2 | 28.5-29 | Benzene | 4.1 | 2.40E-07 |
| | | Chloroform | 58.5 | 4.40E-07 |
| | | Ethylbenzene | 13.9 | 1.90E-08 |
| | | Tetrachloroethene (PCE) | 33.9 | 1.20E-06 |
| | | Toluene | 24.1 | 1.30E-07 |
| | | 1,2,4-Trimethylbenzene | 15.2 | 3.20E-06 |
| | | 1,3,5-Trimethylbenzene | 7.4 | 1.60E-06 |
| | | p-Xylene | 52.1 | 7.50E-07 |
| | | o-Xylene | 15.2 | 2.70E-07 |
| | | | **Total** | **7.8E-06** |

**Table B-10**
**Estimated Non-cancer Hazard Quotient, Soil Gas Sampling Location SGRA-3 at 11.5 ft, 18.5 ft and 28.5 ft bgs**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Sample Location | Soil Gas Sample Depth (ft bgs) | VOC | VOC Soil Gas Concentration (µg/m3) | Estimated Hazard Quotient (J&E Model) |
|---|---|---|---|---|
| SGRA-3 | 11.5-12 | Benzene | 16.6 | 9.20E-06 |
| | | Chloroform | 122.0 | 8.10E-06 |
| | | Ethylbenzene | 32.1 | 4.40E-07 |
| | | Tetrachloroethene (PCE) | 23.7 | 8.70E-06 |
| | | Toluene | 124.3 | 6.70E-06 |
| | | 1,2,4-Trimethylbenzene | 19.2 | 3.70E-05 |
| | | 1,3,5-Trimethylbenzene | 9.3 | 1.80E-05 |
| | | p-Xylene | 112.8 | 1.60E-05 |
| | | o-Xylene | 28.2 | 4.70E-06 |
| | | | **Total** | **1.1E-04** |
| SGRA-3 | 18.5-19 | Benzene | 19.8 | 4.50E-06 |
| | | Chloroform | 53.7 | 1.50E-06 |
| | | Ethylbenzene | 52.1 | 2.90E-07 |
| | | Tetrachloroethene (PCE) | 12.9 | 1.90E-06 |
| | | Toluene | 94.1 | 2.00E-06 |
| | | 1,2,4-Trimethylbenzene | 132.6 | 1.10E-04 |
| | | 1,3,5-Trimethylbenzene | 68.8 | 5.50E-05 |
| | | p-Xylene | 169.2 | 9.70E-06 |
| | | o-Xylene | 82.4 | 5.60E-06 |
| | | | **Total** | **1.9E-04** |
| SGRA-3 | 28.5-29 | Benzene | 28.4 | 9.30E-06 |
| | | Chloroform | 20.0 | 7.80E-07 |
| | | Ethylbenzene | 28.2 | 2.30E-07 |
| | | Tetrachloroethene (PCE) | 50.8 | 1.10E-05 |
| | | Toluene | 143.1 | 4.60E-06 |
| | | p-Xylene | 95.4 | 8.10E-06 |
| | | o-Xylene | 25.6 | 2.50E-06 |
| | | | **Total** | **3.7E-05** |

**Table B-11**
**Estimated Non-cancer Hazard Quotient, Soil Gas Sampling Location SGRA-4 at 10.5 ft, 18ft, and 30.5 ft bgs**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Sample Location | Soil Gas Sample Depth (ft bgs) | VOC | VOC Soil Gas Concentration ($\mu g/m^3$) | Estimated Hazard Quotient (J&E Model) |
|---|---|---|---|---|
| SGRA-4 | 10.5-11 | Benzene | 4.8 | 3.70E-06 |
| | | Chloroform | 12.7 | 1.20E-06 |
| | | Ethylbenzene | 12.1 | 2.30E-07 |
| | | Tetrachloroethene (PCE) | 122.0 | 6.40E-05 |
| | | Toluene | 33.9 | 2.50E-06 |
| | | Trichloroethene (TCE) | 12.3 | 4.20E-07 |
| | | Freon 11 | 6.7 | 2.10E-07 |
| | | Freon 113 | 46.7 | 3.00E-08 |
| | | 1,2,4-Trimethylbenzene | 13.3 | 3.60E-05 |
| | | 1,3,5-Trimethylbenzene | 6.9 | 1.90E-05 |
| | | p-Xylene | 42.5 | 8.50E-06 |
| | | o-Xylene | 12.6 | 2.90E-06 |
| | | | **Total** | **1.4E-04** |
| SGRA-4 | 18-18.5 | Benzene | 24.3 | 3.30E-04 |
| | | Chloroform | 31.2 | 4.90E-05 |
| | | Ethylbenzene | 35.1 | 1.20E-05 |
| | | Tetrachloroethene (PCE) | 61.7 | 5.90E-04 |
| | | Toluene | 139.3 | 1.80E-04 |
| | | Freon 113 | 107.2 | 1.30E-06 |
| | | 1,2,4-Trimethylbenzene | 30.9 | 1.50E-03 |
| | | 1,3,5-Trimethylbenzene | 20.1 | 9.60E-04 |
| | | p-Xylene | 112.8 | 4.00E-04 |
| | | o-Xylene | 36.4 | 1.40E-04 |
| | | | **Total** | **4.2E-03** |
| SGRA-4 | 30.5-31 | Tetrachloroethene (PCE) | 155.9 | 1.80E-04 |
| | | Toluene | 146.9 | 2.30E-05 |
| | | Trichloroethene (TCE) | 64.4 | 4.70E-06 |
| | | Freon 113 | 359.9 | 5.10E-07 |
| | | p-Xylene | 160.5 | 6.80E-05 |
| | | | **Total** | **2.8E-04** |

Notes:
For depth of 10.5-11 ft bgs maximum concentration comparing primary/duplicate samples was used in HQ estimation

**Table B-12**
**Summary of Estimated Cancer Risks, Soil Gas Sampling Locations SGRA-1 through SGRA-4**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Soil Gas Sampling Location | Soil Gas Sample Depth (ft bgs) | Total Estimated Indoor Air Vapor Intrusion Cancer Risks | Maximum Cancer Risk per Sampling Location |
|---|---|---|---|
| SGRA-1 | 12.5-13 | 1.6E-07 | **1.6E-07** |
| | 21.5-22 | 1.1E-08 | |
| | 31.5-32 | 2.3E-08 | |
| SGRA-2 | 7-7.5 | 2.0E-07 | **2.0E-07** |
| | 12.5-13 | 6.8E-08 | |
| | 28.5-29 | 1.5E-09 | |
| SGRA-3 | 11.5-12 | 2.9E-08 | **2.9E-08** |
| | 18.5-19 | 6.6E-09 | |
| | 28.5-29 | 7.1E-09 | |
| SGRA-4 | 10.5-11 | 1.1E-08 | |
| | 18-18.5 | 3.3E-07 | **3.3E-07** |
| | 30.5-31 | 1.8E-08 | |

**Table B-13**
**Summary of Estimated Hazard Quotients, Soil Gas Sampling Locations SGRA-1 through SGRA-4**
*Baseline Human Health Risk Assessment*
*Omega Chemical Superfund Site*

| Soil Gas Sampling Location | Soil Gas Sample Depth (ft bgs) | Total Estimated Indoor Air Vapor Intrusion Hazard Quotients | Maximum Hazard Quotient per Sampling Location |
|---|---|---|---|
| SGRA-1 | 12.5-13 | 1.6E-03 | **1.6E-03** |
| | 21.5-22 | 1.3E-04 | |
| | 31.5-32 | 3.5E-04 | |
| SGRA-2 | 7-7.5 | 5.1E-04 | **5.1E-04** |
| | 12.5-13 | 4.2E-04 | |
| | 28.5-29 | 7.8E-06 | |
| SGRA-3 | 11.5-12 | 1.1E-04 | |
| | 18.5-19 | 1.9E-04 | **1.9E-04** |
| | 28.5-29 | 3.7E-05 | |
| SGRA-4 | 10.5-11 | 1.4E-04 | |
| | 18-18.5 | 4.2E-03 | **4.2E-03** |
| | 30.5-31 | 2.8E-04 | |

# Soil Gas Data

**SGRA1 (Primary)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 12.5 ft - 13 ft | | | | Depth: 21.5 ft - 22 ft | | | | Depth: 31.5 ft - 32 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL |
| Acetone | 4.8 | | | 3.30E+03 | nc | 1,453,744 | 5,548,673 | | | | | | | | | | | | |
| Benzene | 1.6 | 36.2 | 122.0 | | | | | 23.6 | | 6.7 | 13.7 | 27.1 | | 11.8 | 23.6 | 22.0 | | 12.1 | 24.3 |
| Bromobenzene | 6.4 | | | 1.00E+01 | nc | 4,405 | 16,814 | | | | | | | | | | | | |
| Bromodichloromethane | 3.4 | | | 1.10E-01 | ca | 48 | 273 | | | | | | | | | | | | |
| Bromoform | 5.2 | | | 1.75E+00 | ca | 769 | 4,327 | | | | | | | | | | | | |
| Bromomethane | 2 | | | 5.21E+00 | nc | 2,297 | 8,767 | 1.0 | ND | 8.1 | 16.7 | 14.4 | ND | 14.4 | 28.7 | 14.7 | ND | 14.7 | 29.5 |
| Bromochloromethane | 3.4 | | | | | | | | | | | | | | | | | | |
| Butane (leak check compound) | 10000 | | | | | | | 5225.3 | | | | 831.3 | | | | 570.0 | | | |
| n-Butylbenzene | 5.5 | | | 1.46E+02 | nc | 64,317 | 245,487 | | | | | | | | | | | | |
| sec-Butylbenzene | 6 | | | 1.46E+02 | nc | 64,317 | 245,487 | | | | | | | | | | | | |
| Carbon disulfide | 1.6 | | | 7.30E+02 | nc | 321,586 | 1,227,434 | | | | | | | | | | | | |
| Carbon tetrachloride | 3.2 | 25.1 | 84.6 | | | | | 13.2 | ND | 13.2 | 27.0 | 23.3 | ND | 23.3 | 46.5 | 23.9 | ND | 23.9 | 47.8 |
| Chlorobenzene | 2.3 | | | 6.21E+01 | nc | 27,335 | 104,332 | 9.7 | ND | 9.7 | 19.8 | 17.0 | ND | 17.0 | 34.0 | 17.5 | ND | 17.5 | 35.0 |
| Chloroethane | 1.3 | | | 2.32E+00 | ca | 1,021 | 5,745 | 5.5 | ND | 5.5 | 11.3 | 9.8 | ND | 9.8 | 19.5 | 10.0 | ND | 10.0 | 20.0 |
| Chloroform | 2.5 | | | 8.30E-02 | ca | 37 | 206 | **68.3** | | 10.2 | 21.0 | 26.3 | | 18.1 | 36.1 | 18.5 | ND | 18.5 | 37.1 |
| Chloromethane | 4.2 | | | 9.49E+01 | nc | 41,806 | 159,566 | 4.3 | ND | 4.3 | 8.9 | 7.6 | ND | 7.6 | 15.3 | 7.8 | ND | 7.8 | 15.7 |
| 2-Chlorotoluene | 4.5 | | | 7.30E+01 | nc | 32,159 | 122,743 | | | | | | | | | | | | |
| 4-Chlorotoluene | 4.5 | | | | | | | | | | | | | | | | | | |
| Cyclohexane | 1.7 | | | 6.21E+03 | nc | 2,733,480 | 10,433,186 | | | | | | | | | | | | |
| Dibromochloromethane | 4.3 | | | 8.00E-02 | ca | 35 | 198 | | | | | | | | | | | | |
| Dibromochloropropane (DBCP) | 9.7 | | | 2.09E-01 | nc | 92 | 351 | | | | | | | | | | | | |
| Dibromomethane | | | | 3.65E+01 | nc | 16,079 | 61,372 | | | | | | | | | | | | |
| 1,2-Dibromoethane | 3.9 | | | 3.40E-03 | ca | 1 | 8 | **16.1** | ND | 16.1 | 33.0 | **28.4** | ND | 28.4 | 56.8 | **29.2** | ND | 29.2 | 58.3 |
| 1,2-Dichloro-Tetrafluoroethane | 6.3 | | | | | | | 14.7 | ND | 14.7 | 30.0 | 25.8 | ND | 25.8 | 51.7 | 26.5 | ND | 26.5 | 53.1 |
| 1,2-Dichlorobenzene | 3 | | | 2.09E+02 | nc | 91,882 | 350,695 | 12.6 | ND | 12.6 | 25.8 | 22.2 | ND | 22.2 | 44.5 | 22.8 | ND | 22.8 | 45.7 |
| 1,3-Dichlorobenzene | 3 | | | 1.10E+02 | nc | 48,238 | 184,115 | 12.6 | ND | 12.6 | 25.8 | 22.2 | ND | 22.2 | 44.5 | 22.8 | ND | 22.8 | 45.7 |
| 1,4-Dichlorobenzene | 3 | | | 3.06E-01 | ca | 135 | 757 | 12.6 | ND | 12.6 | 25.8 | 22.2 | ND | 22.2 | 44.5 | 22.8 | ND | 22.8 | 45.7 |
| Dichlorodifluoromethane (Freon 12) | 2.5 | | | 2.09E+02 | nc | 91,882 | 350,695 | 10.4 | ND | 10.4 | 21.2 | 18.3 | ND | 18.3 | 36.6 | 18.8 | ND | 18.8 | 37.6 |
| 1,1-Dichloroethane | 2 | | | 5.21E+02 | nc | 229,704 | 876,738 | 8.5 | ND | 8.5 | 17.4 | 15.0 | ND | 15.0 | 29.9 | 15.4 | ND | 15.4 | 30.7 |
| 1,2-Dichloroethane | 2 | 49.6 | 167.0 | | | | | 8.5 | ND | 8.5 | 17.4 | 15.0 | ND | 15.0 | 29.9 | 15.4 | ND | 15.4 | 30.7 |
| 1,1-Dichloroethene | 2 | | | 2.08E+02 | nc | 91,652 | 349,819 | 8.3 | ND | 8.3 | 17.0 | 14.7 | ND | 14.7 | 29.3 | 15.1 | ND | 15.1 | 30.1 |
| *cis*-1,2-Dichloroethene | 2 | 15900.0 | 44400.0 | | | | | 8.3 | ND | 8.3 | 17.0 | 14.7 | ND | 14.7 | 29.3 | 15.1 | ND | 15.1 | 30.1 |
| *trans*-1,2-Dichloroethene | 2 | 31900.0 | 88700.0 | | | | | | | | | | | | | | | | |
| Dichloromethane (Methylene chloride) | 1.8 | | | 4.09E+00 | ca | 1,801 | 10,128 | 7.3 | ND | 7.3 | 14.9 | 12.8 | ND | 12.8 | 25.7 | 13.2 | ND | 13.2 | 26.4 |
| 1,2-Dichloropropane | 2.3 | | | 9.89E-02 | ca | 44 | 245 | 9.7 | ND | 9.7 | 19.9 | 17.1 | ND | 17.1 | 34.2 | 17.5 | ND | 17.5 | 35.1 |
| 1,3-Dichloropropane | 2.3 | | | 7.30E+01 | nc | 32,159 | 122,743 | | | | | | | | | | | | |
| 2,2-Dichloropropane | 2.3 | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloropropene | 2.3 | | | | | | | | | | | | | | | | | | |
| *cis*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 212 | 1,190 | 9.5 | ND | 9.5 | 19.5 | 16.8 | ND | 16.8 | 33.6 | 17.2 | ND | 17.2 | 34.5 |
| *trans*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 212 | 1,190 | 9.5 | ND | 9.5 | 19.5 | 16.8 | ND | 16.8 | 33.6 | 17.2 | ND | 17.2 | 34.5 |
| Ethanol | | | | | | | | | | | | | | | | | | | |
| Ethyl acetate | | | | 3.29E+03 | nc | 1,447,137 | 5,523,451 | | | | | | | | | | | | |
| Ethylbenzene | 2.2 | | | 1.06E+03 | nc | 466,300 | 1,779,779 | 35.1 | | 9.1 | 18.7 | 23.4 | | 16.1 | 32.1 | 33.0 | | 16.5 | 33.0 |
| n-Hexane | 4.1 | | | 2.09E+02 | nc | 91,882 | 350,695 | | | | | | | | | | | | |
| 2-Hexanone | 8.3 | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 22 | | | 8.62E-02 | ca | 38 | 214 | 22.4 | ND | 22.4 | 45.8 | 39.4 | ND | 39.4 | 78.9 | 40.5 | ND | 40.5 | 81.0 |
| Isopropanol | 2.5 | | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 4.9 | | | 4.02E+02 | nc | 176,872 | 675,088 | | | | | | | | | | | | |
| Methyl acetate | 3.6 | | | 3.65E+03 | nc | 1,607,930 | 6,137,168 | | | | | | | | | | | | |
| Methyl ethyl ketone | 1.5 | | | 5.11E+03 | nc | 2,251,101 | 8,592,035 | | | | | | | | | | | | |
| Methyl isobutyl ketone (MIBK) | 2.1 | | | 3.14E+03 | nc | 1,382,819 | 5,277,965 | | | | | | | | | | | | |
| Methyl-t-butyl ether | 3.6 | 4000.0 | 13400.0 | | | | | | | | | | | | | | | | |
| Methylcyclohexane | 4 | | | 3.13E+03 | nc | 1,378,225 | 5,260,430 | | | | | | | | | | | | |
| Naphthalene | 5.3 | 31.9 | 106.0 | | | | | | | | | | | | | | | | |
| n-Propylbenzene | 4.9 | | | 1.46E+02 | nc | 64,317 | 245,487 | | | | | | | | | | | | |
| Styrene | 2.2 | | | 1.06E+03 | nc | 466,300 | 1,779,779 | 8.9 | ND | 8.9 | 18.3 | 15.7 | ND | 15.7 | 31.5 | 16.2 | ND | 16.2 | 32.3 |
| 1,1,1,2-Tetrachloroethane | 6.9 | | | 2.60E-01 | ca | 114 | 643 | | | | | | | | | | | | |

**SGRA1 (Primary)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 12.5 ft - 13 ft | | | | Depth: 21.5 ft - 22 ft | | | | Depth: 31.5 ft - 32 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL |
| 1,1,2,2-Tetrachloroethane | 3.5 | | | 3.31E-02 | ca | 15 | 82 | 14.4 | ND | 14.4 | 29.5 | **25.4** | ND | 25.4 | 50.8 | **26.1** | ND | 26.1 | 52.1 |
| Tetrachloroethene (PCE) | 3.4 | 180.0 | 603.0 | | | | | 21.0 | | 14.2 | 29.1 | 35.9 | | 25.1 | 50.1 | **325.3** | | 25.8 | 51.5 |
| Toluene | 1.9 | 135000.0 | 378000.0 | | | | | 131.8 | | 7.9 | 16.2 | 79.1 | | 13.9 | 27.9 | 113.0 | | 14.3 | 28.6 |
| 1,2,4-Trichlorobenzene | 1.5 | | | 3.65E+00 | nc | 1,608 | 6,137 | 15.6 | ND | 15.6 | 31.9 | 27.4 | ND | 27.4 | 54.9 | 28.2 | ND | 28.2 | 56.4 |
| 1,1,1-Trichloroethane | 2.5 | 991000.0 | 2790000.0 | | | | | 11.5 | ND | 11.5 | 23.4 | 20.2 | ND | 20.2 | 40.3 | 20.7 | ND | 20.7 | 41.4 |
| 1,1,2-Trichloroethane | 2.8 | | | 1.20E-01 | ca | 53 | 298 | 11.5 | ND | 11.5 | 23.4 | 20.2 | ND | 20.2 | 40.3 | 20.7 | ND | 20.7 | 41.4 |
| Trichloroethene (TCE) Cal-Modified PRG | 2.7 | 528.0 | 1770.0 | 9.61E-01 | ca[5] | 423 | 2,380 | 11.3 | ND | 11.3 | 23.1 | 19.9 | ND | 19.9 | 39.7 | 150.3 | | 20.4 | 40.8 |
| Trichlorofluoromethane (Freon 11) | 5.6 | | | 7.30E+02 | nc | 321,586 | 1,227,434 | 11.8 | ND | 11.8 | 24.1 | 20.8 | ND | 20.8 | 41.5 | 21.3 | ND | 21.3 | 42.7 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 8 | | | 3.13E+04 | nc | 13,779,956 | 52,595,531 | 16.1 | ND | 16.1 | 32.9 | 28.3 | ND | 28.3 | 56.7 | 63.6 | | 29.1 | 58.2 |
| 1,2,4-Trimethylbenzene | | | | 6.21E+00 | nc | 2,733 | 10,433 | 38.3 | | 10.3 | 21.1 | 24.1 | | 18.2 | 36.3 | 38.3 | | 18.7 | 37.3 |
| 1,3,5-Trimethylbenzene | | | | 6.21E+00 | nc | 2,733 | 10,433 | 21.6 | | 10.3 | 21.1 | 23.1 | | 18.2 | 36.3 | 19.2 | | 18.7 | 37.3 |
| 2,2,4-Trimethylpentane | | | | | | | | | | | | | | | | | | | |
| Vinyl acetate | | | | 2.09E+02 | nc | 91,882 | 350,695 | | | | | | | | | | | | |
| Vinyl chloride | 1.3 | 13.3 | 44.8 | | | | | 5.4 | ND | 5.4 | 11.0 | 9.5 | ND | 9.5 | 18.9 | 9.7 | ND | 9.7 | 19.4 |
| m,p-Xylene | 2.2 | 317000.0 | 887000.0 | | | | | 125.8 | | 18.7 | 37.3 | 47.7 | | 32.1 | 65.1 | 121.5 | | 33.0 | 65.1 |
| o-Xylene | 2.2 | 315000.0 | 879000.0 | | | | | 34.7 | | 9.1 | 18.7 | 29.1 | | 16.1 | 32.1 | 29.5 | | 16.5 | 33.0 |
| 1,4-Dioxane | 7.3 | | | 6.11E-01 | ca | 269 | 1,515 | | | | | | | | | | | | |
| Butane, methyl | | | | | | | | 147.4 | | | | 289.0 | | | | | | | |
| Butene | | | | | | | | 59.6 | | | | | | | | | | | |
| Butene, methyl | | | | | | | | 108.9 | | | | 272.3 | | | | | | | |
| Hexene | | | | | | | | 189.2 | | | | | | | | | | | |
| Isobutane | | | | | | | | 2612.7 | | | | 261.3 | | | | | | | |
| Pentane | | | | | | | | 129.7 | | | | 277.2 | | | | | | | |
| Pentene | | | | | | | | 181.1 | | | | 58.2 | | | | 278.1 | | | |
| unknown[6] | | | | | | | | 84 | | | | | | | | | | | |
| unknown[6] (01) | | | | | | | | 140 | | | | | | | | | | | |
| unknown[6] (02) | | | | | | | | 60 | | | | | | | | | | | |
| unknown[6] (03) | | | | | | | | 100 | | | | | | | | | | | |
| unknown[6] fluorocarbon (01) | | | | | | | | 26 | | | | | | | | 140 | | | |
| unknown[6] fluorocarbon (02) | | | | | | | | 62 | | | | | | | | 75 | | | |
| unknown[6] hydrocarbon | | | | | | | | | | | | 77 | | | | 25 | | | |
| unknown[6] hydrocarbon (02) | | | | | | | | | | | | 6.2 | | | | | | | |

Notes:

[1] Table 2, "Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties" (CalEPA, January 2005)

[2] EPA Region 9, "Preliminary Remediation Goals" (October 2004)

[3] Residential (Ambient Air PRG Based): Region 9 Ambient Air PRG divided by "alpha" (2.27E-03; Table 3,"Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soils, CalEPA OEHHA", 2005)

[4] Commercial/Industrial: Region 9 Ambient Air PRG was multiplied by 2.8 for carcinogens or 1.9 for noncarcinogens to estimate a Commercial/Industrial Worker PRG, which was then divided by the Commercial/Industrial "alpha" (e.g. 1.13E-03, which assumes a fully calibrated/maintained HVAC system; Table 3, CalEPA OEHHA, 2005)

[5] TCE: For the EPA NCEA Provisional Draft toxicity value the posted air concentrations would be towards the upper end of the risk management range of 1E-04.

[6] Unit of unknown analyte is ppvb.

[7] Nondetects (NDs) are posted at Method Detection Limit (MDL) as a proxy value.

[8] Bolded values are values that exceed a Residential CHHSL or a Residential soil gas screening level.

**SGRA1 (Field Duplicate)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 12.5' - 13' | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL |
| Acetone | 4.8 | | | 3.30E+03 | nc | 1453744 | 5548673 | | | | |
| Benzene | 1.6 | 36.2 | 122.0 | | | | | 26.8 | | 7.0 | 13.7 |
| Bromobenzene | 6.4 | | | 1.00E+01 | nc | 4405 | 16814 | | | | |
| Bromodichloromethane | 3.4 | | | 1.10E-01 | ca | 48 | 273 | | | | |
| Bromoform | 5.2 | | | 1.75E+00 | ca | 769 | 4327 | | | | |
| Bromomethane | 2 | | | 5.21E+00 | nc | 2297 | 8767 | 8.5 | ND | 8.5 | 16.7 |
| Bromochloromethane | 3.4 | | | | | | | | | | |
| Butane (leak check compound) | 10000 | | | | | | | 1211.3 | | | |
| n-Butylbenzene | 5.5 | | | 1.46E+02 | nc | 64317 | 245487 | | | | |
| sec-Butylbenzene | 6 | | | 1.46E+02 | nc | 64317 | 245487 | | | | |
| Carbon disulfide | 1.6 | | | 7.30E+02 | nc | 321586 | 1227434 | | | | |
| Carbon tetrachloride | 3.2 | 25.1 | 84.6 | | | | | 13.8 | ND | 13.8 | 27.0 |
| Chlorobenzene | 2.3 | | | 6.21E+01 | nc | 27335 | 104332 | 10.1 | ND | 10.1 | 19.8 |
| Chloroethane | 1.3 | | | 2.32E+00 | ca | 1021 | 5745 | 5.8 | ND | 5.8 | 11.3 |
| Chloroform | 2.5 | | | 8.30E-02 | ca | 37 | 206 | **78.1** | | 10.7 | 21.0 |
| Chloromethane | 4.2 | | | 9.49E+01 | nc | 41806 | 159566 | 4.5 | ND | 4.5 | 8.9 |
| 2-Chlorotoluene | 4.5 | | | 7.30E+01 | nc | 32159 | 122743 | | | | |
| 4-Chlorotoluene | 4.5 | | | | | | | | | | |
| Cyclohexane | 1.7 | | | 6.21E+03 | nc | 2733480 | 10433186 | | | | |
| Dibromochloromethane | 4.3 | | | 8.00E-02 | ca | 35 | 198 | | | | |
| Dibromochloropropane (DBCP) | 9.7 | | | 2.09E-01 | nc | 92 | 351 | | | | |
| Dibromomethane | | | | 3.65E+01 | nc | 16079 | 61372 | | | | |
| 1,2-Dibromoethane | 3.9 | | | 3.40E-03 | ca | 1 | 8 | **16.9** | ND | 16.9 | 33.0 |
| 1,2-Dichloro-Tetrafluoroethane | 6.3 | | | | | | | 15.4 | ND | 15.4 | 30.0 |
| 1,2-Dichlorobenzene | 3 | | | 2.09E+02 | nc | 91882 | 350695 | 13.2 | ND | 13.2 | 25.8 |
| 1,3-Dichlorobenzene | 3 | | | 1.10E+02 | nc | 48238 | 184115 | 13.2 | ND | 13.2 | 25.8 |
| 1,4-Dichlorobenzene | 3 | | | 3.06E-01 | ca | 135 | 757 | 13.2 | ND | 13.2 | 25.8 |
| Dichlorodifluoromethane (Freon 12) | 2.5 | | | 2.09E+02 | nc | 91882 | 350695 | 10.9 | ND | 10.9 | 21.2 |
| 1,1-Dichloroethane | 2 | | | 5.21E+02 | nc | 229704 | 876738 | 8.9 | ND | 8.9 | 17.4 |
| 1,2-Dichloroethane | 2 | 49.6 | 167.0 | | | | | 8.9 | ND | 8.9 | 17.4 |
| 1,1-Dichloroethene | 2 | | | 2.08E+02 | nc | 91652 | 349819 | 8.7 | ND | 8.7 | 17.0 |
| *cis*-1,2-Dichloroethene | 2 | 15900.0 | 44400.0 | | | | | 8.7 | ND | 8.7 | 17.0 |
| *trans*-1,2-Dichloroethene | 2 | 31900.0 | 88700.0 | | | | | | | | |
| Dichloromethane (Methylene chloride) | 1.8 | | | 4.09E+00 | ca | 1801 | 10128 | 7.6 | ND | 7.6 | 14.9 |
| 1,2-Dichloropropane | 2.3 | | | 9.89E-02 | ca | 44 | 245 | 10.2 | ND | 10.2 | 19.9 |
| 1,3-Dichloropropane | 2.3 | | | 7.30E+01 | nc | 32159 | 122743 | | | | |
| 2,2-Dichloropropane | 2.3 | | | | | | | | | | |
| 1,1-Dichloropropene | 2.3 | | | | | | | | | | |
| *cis*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 212 | 1190 | 10.0 | ND | 10.0 | 19.5 |
| *trans*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 212 | 1190 | 10.0 | ND | 10.0 | 19.5 |
| Ethanol | | | | | | | | | | | |
| Ethyl acetate | | | | 3.29E+03 | nc | 1447137 | 5523451 | | | | |
| Ethylbenzene | 2.2 | | | 1.06E+03 | nc | 466300 | 1779779 | 41.6 | | 9.5 | 18.7 |
| n-Hexane | 4.1 | | | 2.09E+02 | nc | 91882 | 350695 | | | | |
| 2-Hexanone | 8.3 | | | | | | | | | | |
| Hexachlorobutadiene | 22 | | | 8.62E-02 | ca | 38 | 214 | 23.4 | ND | 23.4 | 45.8 |
| Isopropanol | 2.5 | | | | | | | | | | |
| Isopropylbenzene | 4.9 | | | 4.02E+02 | nc | 176872 | 675088 | | | | |
| Methyl acetate | 3.6 | | | 3.65E+03 | nc | 1607930 | 6137168 | | | | |
| Methyl ethyl ketone | 1.5 | | | 5.11E+03 | nc | 2251101 | 8592035 | | | | |
| Methyl isobutyl ketone (MIBK) | 2.1 | | | 3.14E+03 | nc | 1382819 | 5277965 | | | | |

**SGRA1 (Field Duplicate)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 12.5' - 13' | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL |
| Methyl-t-butyl ether | 3.6 | 4000.0 | 13400.0 | | | | | | | | |
| Methylcyclohexane | 4 | | | 3.13E+03 | nc | 1378225 | 5260430 | | | | |
| Naphthalene | 5.3 | 31.9 | 106.0 | | | | | | | | |
| n-Propylbenzene | 4.9 | | | 1.46E+02 | nc | 64317 | 245487 | | | | |
| Styrene | 2.2 | | | 1.06E+03 | nc | 466300 | 1779779 | 9.4 | ND | 9.4 | 18.3 |
| 1,1,1,2-Tetrachloroethane | 6.9 | | | 2.60E-01 | ca | 114 | 643 | | | | |
| 1,1,2,2-Tetrachloroethane | 3.5 | | | 3.31E-02 | ca | 15 | 82 | **15.1** | ND | 15.1 | 29.5 |
| Tetrachloroethene (PCE) | 3.4 | 180.0 | 603.0 | | | | | 25.8 | | 14.9 | 29.1 |
| Toluene | 1.9 | 135000.0 | 378000.0 | | | | | 150.6 | | 8.3 | 16.2 |
| 1,2,4-Trichlorobenzene | 1.5 | | | 3.65E+00 | nc | 1608 | 6137 | 16.3 | ND | 16.3 | 31.9 |
| 1,1,1-Trichloroethane | 2.5 | 991000.0 | 2790000.0 | | | | | 12.0 | ND | 12.0 | 23.4 |
| 1,1,2-Trichloroethane | 2.8 | | | 1.20E-01 | ca | 53 | 298 | 12.0 | ND | 12.0 | 23.4 |
| Trichloroethene (TCE) Cal-Modified PRG | 2.7 | 528.0 | 1770.0 | 9.61E-01 | ca[5] | 423 | 2380 | 11.8 | ND | 11.8 | 23.1 |
| Trichlorofluoromethane (Freon 11) | 5.6 | | | 7.30E+02 | nc | 321586 | 1227434 | 12.4 | ND | 12.4 | 24.1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 8 | | | 3.13E+04 | nc | 13779956 | 52595531 | 16.8 | ND | 16.8 | 32.9 |
| 1,2,4-Trimethylbenzene | | | | 6.21E+00 | nc | 2733 | 10433 | 48.1 | | 10.8 | 21.1 |
| 1,3,5-Trimethylbenzene | | | | 6.21E+00 | nc | 2733 | 10433 | 28.0 | | 10.8 | 21.1 |
| 2,2,4-Trimethylpentane | | | | | | | | | | | |
| Vinyl acetate | | | | 2.09E+02 | nc | 91882 | 350695 | | | | |
| Vinyl chloride | 1.3 | 13.3 | 44.8 | | | | | 5.6 | ND | 5.6 | 11.0 |
| m,p-Xylene | 2.2 | 317000.0 | 887000.0 | | | | | 151.8 | | 18.7 | 37.3 |
| o-Xylene | 2.2 | 315000.0 | 879000.0 | | | | | 41.6 | | 9.5 | 18.7 |
| 1,4-Dioxane | 7.3 | | | 6.11E-01 | ca | 269 | 1515 | | | | |
| Isobutane | | | | | | | | 125.9 | | | |
| Pentane | | | | | | | | 132.7 | | | |
| Pentene | | | | | | | | 172.0 | | | |
| Butene, methyl | | | | | | | | 117.5 | | | |
| Butane, methyl | | | | | | | | 138.6 | | | |
| Butene | | | | | | | | 80.3 | | | |
| unknown[6] fluorocarbon (01) | | | | | | | | 29 | | | |
| unknown[6] fluorocarbon (02) | | | | | | | | 69 | | | |

Notes:

[1] Table 2, "Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties" (CalEPA, January 2005)

[2] EPA Region 9, "Preliminary Remediation Goals" (October 2004)

[3] Residential (Ambient Air PRG Based): Region 9 Ambient Air PRG divided by "alpha" (2.27E-03; Table 3,"Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soils, CalEPA OEHHA", 2005)

[4] Commercial/Industrial: Region 9 Ambient Air PRG was multiplied by 2.8 for carcinogens or 1.9 for noncarcinogens to estimate a Commercial/Industrial Worker PRG, which was then divided by the Commercial/Industrial "alpha" (e.g. 1.13E-03, which assumes a fully calibrated/maintained HVAC system; Table 3, CalEPA OEHHA, 2005)

[5] TCE: For the EPA NCEA Provisional Draft toxicity value the posted air concentrations would be towards the upper end of the risk management range of 1E-04.

[6] Unit of unknown analyte is ppvb.

[7] Nondetects (NDs) are posted at Method Detection Limit (MDL) as a proxy value.

[8] Bolded values are values that exceed a Residential CHHSL or a Residential soil gas screening level.

**SGRA2 (Primary)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (μg/m³) | | | | | | | Lab Results (μg/m³) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 7 ft - 7.5 ft | | | | Depth: 12.5 ft - 13 ft | | | | Depth: 28.5 ft - 29 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: μg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL |
| Acetone | 4.8 | | | 3.30E+03 | nc | 1453744.5 | 5.55E+06 | | | | | | | | | | | | |
| Benzene | 1.6 | 36.2 | 1.22E+02 | | | | | 4.1 | | 3.5 | 6.7 | 8.3 | | 3.5 | 6.7 | 4.1 | | 3.5 | 6.7 |
| Bromobenzene | 6.4 | | | 1.00E+01 | nc | 4405.3 | 1.68E+04 | | | | | | | | | | | | |
| Bromodichloromethane | 3.4 | | | 1.10E-01 | ca | 48.5 | 2.73E+02 | | | | | | | | | | | | |
| Bromoform | 5.2 | | | 1.75E+00 | ca | 769.3 | 4.33E+03 | | | | | | | | | | | | |
| Bromomethane | 2 | | | 5.21E+00 | nc | 2297.0 | 8.77E+03 | 4.3 | ND | 4.3 | 8.1 | 4.3 | ND | 4.3 | 8.1 | 4.3 | ND | 4.3 | 8.1 |
| Bromochloromethane | 3.4 | | | | | | | | | | | | | | | | | | |
| Butane (leak check compound) | 10000 | | | | | | | 38.0 | | | | 71.3 | | | | 90.3 | | | |
| n-Butylbenzene | 5.5 | | | 1.46E+02 | nc | 64317.2 | 2.45E+05 | | | | | | | | | | | | |
| sec-Butylbenzene | 6 | | | 1.46E+02 | nc | 64317.2 | 2.45E+05 | | | | | | | | | | | | |
| Carbon disulfide | 1.6 | | | 7.30E+02 | nc | 321585.9 | 1.23E+06 | | | | | | | | | | | | |
| Carbon tetrachloride | 3.2 | 25.1 | 8.46E+01 | | | | | 6.9 | ND | 6.9 | 13.2 | 6.9 | ND | 6.9 | 13.2 | 6.9 | ND | 6.9 | 13.2 |
| Chlorobenzene | 2.3 | | | 6.21E+01 | nc | 27334.8 | 1.04E+05 | 5.1 | ND | 5.1 | 9.7 | 5.1 | ND | 5.1 | 9.7 | 5.1 | ND | 5.1 | 9.7 |
| Chloroethane | 1.3 | | | 2.32E+00 | ca | 1021.4 | 5.74E+03 | 2.9 | ND | 2.9 | 5.5 | 2.9 | ND | 2.9 | 5.5 | 2.9 | ND | 2.9 | 5.5 |
| Chloroform | 2.5 | | | 8.30E-02 | ca | 36.6 | 2.06E+02 | **175.6** | | 5.4 | 10.2 | **117.1** | | 5.4 | 10.2 | **58.5** | | 5.4 | 10.2 |
| Chloromethane | 4.2 | | | 9.49E+01 | nc | 41806.2 | 1.60E+05 | 2.3 | ND | 2.3 | 4.3 | 2.3 | ND | 2.3 | 4.3 | 2.3 | ND | 2.3 | 4.3 |
| 2-Chlorotoluene | 4.5 | | | 7.30E+01 | nc | 32158.6 | 1.23E+05 | | | | | | | | | | | | |
| 4-Chlorotoluene | 4.5 | | | | | | | | | | | | | | | | | | |
| Cyclohexane | 1.7 | | | 6.21E+03 | nc | 2733480.2 | 1.04E+07 | | | | | | | | | | | | |
| Dibromochloromethane | 4.3 | | | 8.00E-02 | ca | 35.3 | 1.98E+02 | | | | | | | | | | | | |
| Dibromochloropropane (DBCP) | 9.7 | | | 2.09E-01 | nc | 91.9 | 3.51E+02 | | | | | | | | | | | | |
| Dibromomethane | | | | 3.65E+01 | nc | 16079.3 | 6.14E+04 | | | | | | | | | | | | |
| 1,2-Dibromoethane | 3.9 | | | 3.40E-03 | ca | 1.5 | 8.42E+00 | **8.4** | ND | 8.4 | 16.1 | **8.4** | ND | 8.4 | 16.1 | **8.4** | ND | 8.4 | 16.1 |
| 1,2-Dichloro-Tetrafluoroethane | 6.3 | | | | | | | 7.7 | ND | 7.7 | 14.7 | 7.7 | ND | 7.7 | 14.7 | 7.7 | ND | 7.7 | 14.7 |
| 1,2-Dichlorobenzene | 3 | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | 6.6 | ND | 6.6 | 12.6 | 6.6 | ND | 6.6 | 12.6 | 6.6 | ND | 6.6 | 12.6 |
| 1,3-Dichlorobenzene | 3 | | | 1.10E+02 | nc | 48237.9 | 1.84E+05 | 6.6 | ND | 6.6 | 12.6 | 6.6 | ND | 6.6 | 12.6 | 6.6 | ND | 6.6 | 12.6 |
| 1,4-Dichlorobenzene | 3 | | | 3.06E-01 | ca | 134.6 | 7.57E+02 | 6.6 | ND | 6.6 | 12.6 | 6.6 | ND | 6.6 | 12.6 | 6.6 | ND | 6.6 | 12.6 |
| Dichlorodifluoromethane (Freon 12) | 2.5 | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | 5.4 | ND | 5.4 | 10.4 | 5.4 | ND | 5.4 | 10.4 | 5.4 | ND | 5.4 | 10.4 |
| 1,1-Dichloroethane | 2 | | | 5.21E+02 | nc | 229704.2 | 8.77E+05 | 4.4 | ND | 4.4 | 8.5 | 4.4 | ND | 4.4 | 8.5 | 4.4 | ND | 4.4 | 8.5 |
| 1,2-Dichloroethane | 2 | 49.6 | 1.67E+02 | | | | | 4.4 | ND | 4.4 | 8.5 | 4.4 | ND | 4.4 | 8.5 | 4.4 | ND | 4.4 | 8.5 |
| 1,1-Dichloroethene | 2 | | | 2.08E+02 | nc | 91652.0 | 3.50E+05 | 4.4 | ND | 4.4 | 8.3 | 4.4 | ND | 4.4 | 8.3 | 4.4 | ND | 4.4 | 8.3 |
| *cis*-1,2-Dichloroethene | 2 | 15900.0 | 4.44E+04 | | | | | 4.4 | ND | 4.4 | 8.3 | 4.4 | ND | 4.4 | 8.3 | 4.4 | ND | 4.4 | 8.3 |
| *trans*-1,2-Dichloroethene | 2 | 31900.0 | 8.87E+04 | | | | | | | | | | | | | | | | |
| Dichloromethane (Methylene chloride) | 1.8 | | | 4.09E+00 | ca | 1800.6 | 1.01E+04 | 3.8 | ND | 3.8 | 7.3 | 3.8 | ND | 3.8 | 7.3 | 3.8 | ND | 3.8 | 7.3 |
| 1,2-Dichloropropane | 2.3 | | | 9.89E-02 | ca | 43.6 | 2.45E+02 | 5.1 | ND | 5.1 | 9.7 | 5.1 | ND | 5.1 | 9.7 | 5.1 | ND | 5.1 | 9.7 |
| 1,3-Dichloropropane | 2.3 | | | 7.30E+01 | nc | 32158.6 | 1.23E+05 | | | | | | | | | | | | |
| 2,2-Dichloropropane | 2.3 | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloropropene | 2.3 | | | | | | | | | | | | | | | | | | |
| *cis*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 211.6 | 1.19E+03 | 5.0 | ND | 5.0 | 9.5 | 5.0 | ND | 5.0 | 9.5 | 5.0 | ND | 5.0 | 9.5 |
| *trans*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 211.6 | 1.19E+03 | 5.0 | ND | 5.0 | 9.5 | 5.0 | ND | 5.0 | 9.5 | 5.0 | ND | 5.0 | 9.5 |
| Ethanol | | | | | | | | | | | | | | | | | | | |
| Ethyl acetate | | | | 3.29E+03 | nc | 1447136.6 | 5.52E+06 | | | | | | | | | | | | |
| Ethylbenzene | 2.2 | | | 1.06E+03 | nc | 466299.6 | 1.78E+06 | 10.0 | | 4.8 | 9.1 | 23.9 | | 4.8 | 9.1 | 13.9 | | 4.8 | 9.1 |
| n-Hexane | 4.1 | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | | | | | | | | | | | | |
| 2-Hexanone | 8.3 | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 22 | | | 8.62E-02 | ca | 38.0 | 2.14E+02 | 11.7 | ND | 11.7 | 22.4 | 11.7 | ND | 11.7 | 22.4 | 11.7 | ND | 11.7 | 22.4 |
| Isopropanol | 2.5 | | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 4.9 | | | 4.02E+02 | nc | 176872.2 | 6.75E+05 | | | | | | | | | | | | |
| Methyl acetate | 3.6 | | | 3.65E+03 | nc | 1607929.5 | 6.14E+06 | | | | | | | | | | | | |
| Methyl ethyl ketone | 1.5 | | | 5.11E+03 | nc | 2251101.3 | 8.59E+06 | | | | | | | | | | | | |
| Methyl isobutyl ketone (MIBK) | 2.1 | | | 3.14E+03 | nc | 1382819.4 | 5.28E+06 | | | | | | | | | | | | |
| Methyl-t-butyl ether | 3.6 | 4000.0 | 1.34E+04 | | | | | | | | | | | | | | | | |
| Methylcyclohexane | 4 | | | 3.13E+03 | nc | 1378225.3 | 5.26E+06 | | | | | | | | | | | | |

**SGRA2 (Primary)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 7 ft - 7.5 ft | | | | Depth: 12.5 ft - 13 ft | | | | Depth: 28.5 ft - 29 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL |
| Naphthalene | 5.3 | 31.9 | 1.06E+02 | | | | | | | | | | | | | | | | |
| n-Propylbenzene | 4.9 | | | 1.46E+02 | nc | 64317.2 | 2.45E+05 | | | | | | | | | | | | |
| Styrene | 2.2 | | | 1.06E+03 | nc | 466299.6 | 1.78E+06 | 4.7 | ND | 4.7 | 8.9 | 4.7 | ND | 4.7 | 8.9 | 4.7 | ND | 4.7 | 8.9 |
| 1,1,1,2-Tetrachloroethane | 6.9 | | | 2.60E-01 | ca | 114.4 | 6.43E+02 | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 3.5 | | | 3.31E-02 | ca | 14.6 | 8.21E+01 | 7.5 | ND | 7.5 | 14.4 | 7.5 | ND | 7.5 | 14.4 | 7.5 | ND | 7.5 | 14.4 |
| Tetrachloroethene (PCE) | 3.4 | 180.0 | 6.03E+02 | | | | | 29.8 | | 7.5 | 14.2 | 29.8 | | 7.5 | 14.2 | 33.9 | | 7.5 | 14.2 |
| Toluene | 1.9 | 135000.0 | 3.78E+05 | | | | | 23.3 | | 4.1 | 7.9 | 67.8 | | 4.1 | 7.9 | 24.1 | | 4.1 | 7.9 |
| 1,2,4-Trichlorobenzene | 1.5 | | | 3.65E+00 | nc | 1607.9 | 6.14E+03 | 8.2 | ND | 8.2 | 15.6 | 8.2 | ND | 8.2 | 15.6 | 8.2 | ND | 8.2 | 15.6 |
| 1,1,1-Trichloroethane | 2.5 | 991000.0 | 2.79E+06 | | | | | 6.0 | ND | 6.0 | 11.5 | 6.0 | ND | 6.0 | 11.5 | 6.0 | ND | 6.0 | 11.5 |
| 1,1,2-Trichloroethane | 2.8 | | | 1.20E-01 | ca | 52.9 | 2.98E+02 | 6.0 | ND | 6.0 | 11.5 | 6.0 | ND | 6.0 | 11.5 | 6.0 | ND | 6.0 | 11.5 |
| Trichloroethene (TCE) Cal-Modified PRG | 2.7 | 528.0 | 1.77E+03 | 9.61E-01 | ca5 | 423.1 | 2.38E+03 | 5.9 | ND | 5.9 | 11.3 | 5.9 | ND | 5.9 | 11.3 | 5.9 | ND | 5.9 | 11.3 |
| Trichlorofluoromethane (Freon 11) | 5.6 | | | 7.30E+02 | nc | 321585.9 | 1.23E+06 | 6.2 | ND | 6.2 | 11.8 | 6.2 | ND | 6.2 | 11.8 | 6.2 | ND | 6.2 | 11.8 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 8 | | | 3.13E+04 | nc | 13779955.9 | 5.26E+07 | 8.4 | ND | 8.4 | 16.1 | 8.4 | ND | 8.4 | 16.1 | 8.4 | ND | 8.4 | 16.1 |
| 1,2,4-Trimethylbenzene | | | | 6.21E+00 | nc | 2733.5 | 1.04E+04 | 20.1 | | 5.4 | 10.3 | 41.7 | | 5.4 | 10.3 | 15.2 | | 5.4 | 10.3 |
| 1,3,5-Trimethylbenzene | | | | 6.21E+00 | nc | 2733.5 | 1.04E+04 | 8.3 | | 5.4 | 10.3 | 18.7 | | 5.4 | 10.3 | 7.4 | | 5.4 | 10.3 |
| 2,2,4-Trimethylpentane | | | | | | | | | | | | | | | | | | | |
| Vinyl acetate | | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | | | | | | | | | | | | |
| Vinyl chloride | 1.3 | 13.3 | 4.48E+01 | | | | | 2.8 | ND | 2.8 | 5.4 | 2.8 | ND | 2.8 | 5.4 | 2.8 | ND | 2.8 | 5.4 |
| m,p-Xylene | 2.2 | 317000.0 | 8.87E+05 | | | | | 36.0 | | 9.1 | 18.7 | 91.1 | | 9.1 | 18.7 | 52.1 | | 9.1 | 18.7 |
| o-Xylene | 2.2 | 315000.0 | 8.79E+05 | | | | | 12.1 | | 4.8 | 9.1 | 28.2 | | 4.8 | 9.1 | 15.2 | | 4.8 | 9.1 |
| 1,4-Dioxane | 7.3 | | | 6.11E-01 | ca | 269.3 | 1.51E+03 | | | | | | | | | | | | |
| alpha Pinene | | | | | | | | 77.9 | ND | | | 183.7 | | | | 1169.2 | | | |
| beta Pinene | | | | | | | | | | | | | | | | 111.4 | | | |
| Cyclohexane, tetramethyl- | | | | | | | | 17.8 | | | | | | | | | | | |
| Cyclohexane, trimethyl | | | | | | | | 19.1 | | | | 103.2 | | | | | | | |
| Heptane, ethylmethyl | | | | | | | | | | | | 69.8 | | | | | | | |
| Isobutane | | | | | | | | | | | | 54.6 | | | | 19.0 | | | |
| Octene, dimethyl- | | | | | | | | | | | | 137.6 | | | | | | | |
| Pentane | | | | | | | | | | | | | | | | 16.5 | | | |
| Pentene | | | | | | | | | | | | | | | | 20.6 | | | |
| unknown | | | | | | | | | | | | | | | | 7.4 | | | |
| unknown Fluorocarbon | | | | | | | | | | | | | | | | 5.9 | | | |
| unknown fluorocarbon (01) | | | | | | | | 3.3 | | | | 18 | | | | | | | |
| unknown fluorocarbon (02) | | | | | | | | 2.4 | | | | 30 | | | | | | | |
| unknown fluorocarbon (03) | | | | | | | | 4.6 | | | | | | | | | | | |
| unknown hydrocarbon | | | | | | | | 2.7 | | | | | | | | | | | |

Notes:

[1] Table 2, "Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties" (CalEPA, January 2005)

[2] EPA Region 9, "Preliminary Remediation Goals" (October 2004)

[3] Residential (Ambient Air PRG Based): Region 9 Ambient Air PRG divided by "alpha" (2.27E-03; Table 3,"Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soils, CalEPA OEHHA", 2005)

[4] Commercial/Industrial: Region 9 Ambient Air PRG was multiplied by 2.8 for carcinogens or 1.9 for noncarcinogens to estimate a Commercial/Industrial Worker PRG, which was then divided by the Commercial/Industrial "alpha" (e.g. 1.13E-03, which assumes a fully calibrated/maintained HVAC system; Table 3, CalEPA OEHHA, 2005)

[5] TCE: For the EPA NCEA Provisional Draft toxicity value the posted air concentrations would be towards the upper end of the risk management range of 1E-04.

[6] Unit of unknown analyte is ppvb.

[7] Nondetects (NDs) are posted at Method Detection Limit (MDL) as a proxy value.

[8] Bolded values are values that exceed a Residential CHHSL or a Residential soil gas screening level.

**SGRA3 (Primary)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 11.5 ft - 12 ft | | | | Depth: 18.5 ft - 19 ft | | | | Depth: 28.5 ft - 29 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL |
| Acetone | 4.8 | | | 3.30E+03 | nc | 1453744.5 | 5.55E+06 | | | | | | | | | | | | |
| Benzene | 1.6 | 36.2 | 1.22E+02 | | | | | 16.6 | | 3.5 | 6.7 | 19.8 | | 4.5 | 8.9 | 28.4 | | 11.2 | 22.7 |
| Bromobenzene | 6.4 | | | 1.00E+01 | nc | 4405.3 | 1.68E+04 | | | | | | | | | | | | |
| Bromodichloromethane | 3.4 | | | 1.10E-01 | ca | 48.5 | 2.73E+02 | | | | | | | | | | | | |
| Bromoform | 5.2 | | | 1.75E+00 | ca | 769.3 | 4.33E+03 | | | | | | | | | | | | |
| Bromomethane | 2 | | | 5.21E+00 | nc | 2297.0 | 8.77E+03 | 4.3 | ND | 4.3 | 8.1 | 5.4 | ND | 5.4 | 10.9 | 13.6 | ND | 13.6 | 27.5 |
| Bromochloromethane | 3.4 | | | | | | | | | | | | | | | | | | |
| Butane (leak check compound) | 10000 | | | | | | | 831.3 | | | | 1567.6 | | | | 926.3 | | | |
| n-Butylbenzene | 5.5 | | | 1.46E+02 | nc | 64317.2 | 2.45E+05 | | | | | | | | | | | | |
| sec-Butylbenzene | 6 | | | 1.46E+02 | nc | 64317.2 | 2.45E+05 | | | | | | | | | | | | |
| Carbon disulfide | 1.6 | | | 7.30E+02 | nc | 321585.9 | 1.23E+06 | | | | | | | | | | | | |
| Carbon tetrachloride | 3.2 | 25.1 | 8.46E+01 | | | | | 6.9 | ND | 6.9 | 13.2 | 8.8 | ND | 8.8 | 17.6 | 22.0 | ND | 22.0 | 44.6 |
| Chlorobenzene | 2.3 | | | 6.21E+01 | nc | 27334.8 | 1.04E+05 | 5.1 | ND | 5.1 | 9.7 | 6.4 | ND | 6.4 | 12.9 | 16.1 | ND | 16.1 | 32.7 |
| Chloroethane | 1.3 | | | 2.32E+00 | ca | 1021.4 | 5.74E+03 | 2.9 | ND | 2.9 | 5.5 | 3.7 | ND | 3.7 | 7.4 | 9.2 | ND | 9.2 | 18.7 |
| Chloroform | 2.5 | | | 8.30E-02 | ca | 36.6 | 2.06E+02 | **122.0** | | 5.4 | 10.2 | **53.7** | | 6.8 | 13.7 | 20.0 | | 17.1 | 34.6 |
| Chloromethane | 4.2 | | | 9.49E+01 | nc | 41806.2 | 1.60E+05 | 2.3 | ND | 2.3 | 4.3 | 2.9 | ND | 2.9 | 5.8 | 7.2 | ND | 7.2 | 14.6 |
| 2-Chlorotoluene | 4.5 | | | 7.30E+01 | nc | 32158.6 | 1.23E+05 | | | | | | | | | | | | |
| 4-Chlorotoluene | 4.5 | | | | | | | | | | | | | | | | | | |
| Cyclohexane | 1.7 | | | 6.21E+03 | nc | 2733480.2 | 1.04E+07 | | | | | | | | | | | | |
| Dibromochloromethane | 4.3 | | | 8.00E-02 | ca | 35.3 | 1.98E+02 | | | | | | | | | | | | |
| Dibromochloropropane (DBCP) | 9.7 | | | 2.09E-01 | nc | 91.9 | 3.51E+02 | | | | | | | | | | | | |
| Dibromomethane | | | | 3.65E+01 | nc | 16079.3 | 6.14E+04 | | | | | | | | | | | | |
| 1,2-Dibromoethane | 3.9 | | | 3.40E-03 | ca | 1.5 | 8.42E+00 | **8.4** | ND | 8.4 | 16.1 | **10.7** | ND | 10.7 | 21.5 | **26.9** | ND | 26.9 | 54.5 |
| 1,2-Dichloro-Tetrafluoroethane | 6.3 | | | | | | | 7.7 | ND | 7.7 | 14.7 | 9.8 | ND | 9.8 | 19.6 | 24.4 | ND | 24.4 | 49.6 |
| 1,2-Dichlorobenzene | 3 | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | 6.6 | ND | 6.6 | 12.6 | 8.4 | ND | 8.4 | 16.8 | 21.0 | ND | 21.0 | 42.7 |
| 1,3-Dichlorobenzene | 3 | | | 1.10E+02 | nc | 48237.9 | 1.84E+05 | 6.6 | ND | 6.6 | 12.6 | 8.4 | ND | 8.4 | 16.8 | 21.0 | ND | 21.0 | 42.7 |
| 1,4-Dichlorobenzene | 3 | | | 3.06E-01 | ca | 134.6 | 7.57E+02 | 6.6 | ND | 6.6 | 12.6 | 8.4 | ND | 8.4 | 16.8 | 21.0 | ND | 21.0 | 42.7 |
| Dichlorodifluoromethane (Freon 12) | 2.5 | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | 5.4 | ND | 5.4 | 10.4 | 6.9 | ND | 6.9 | 13.8 | 17.3 | ND | 17.3 | 35.1 |
| 1,1-Dichloroethane | 2 | | | 5.21E+02 | nc | 229704.2 | 8.77E+05 | 4.4 | ND | 4.4 | 8.5 | 5.7 | ND | 5.7 | 11.3 | 14.2 | ND | 14.2 | 28.7 |
| 1,2-Dichloroethane | 2 | 49.6 | 1.67E+02 | | | | | 4.4 | ND | 4.4 | 8.5 | 5.7 | ND | 5.7 | 11.3 | 14.2 | ND | 14.2 | 28.7 |
| 1,1-Dichloroethene | 2 | | | 2.08E+02 | nc | 91652.0 | 3.50E+05 | 4.4 | ND | 4.4 | 8.3 | 5.5 | ND | 5.5 | 11.1 | 13.9 | ND | 13.9 | 28.1 |
| *cis*-1,2-Dichloroethene | 2 | 15900.0 | 4.44E+04 | | | | | 4.4 | ND | 4.4 | 8.3 | 5.5 | ND | 5.5 | 11.1 | 13.9 | ND | 13.9 | 28.1 |
| *trans*-1,2-Dichloroethene | 2 | 31900.0 | 8.87E+04 | | | | | | | | | | | | | | | | |
| Dichloromethane (Methylene chloride) | 1.8 | | | 4.09E+00 | ca | 1800.6 | 1.01E+04 | 3.8 | ND | 3.8 | 7.3 | 4.9 | ND | 4.9 | 9.7 | 12.1 | ND | 12.1 | 24.6 |
| 1,2-Dichloropropane | 2.3 | | | 9.89E-02 | ca | 43.6 | 2.45E+02 | 5.1 | ND | 5.1 | 9.7 | 6.5 | ND | 6.5 | 12.9 | 16.2 | ND | 16.2 | 32.8 |
| 1,3-Dichloropropane | 2.3 | | | 7.30E+01 | nc | 32158.6 | 1.23E+05 | | | | | | | | | | | | |
| 2,2-Dichloropropane | 2.3 | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloropropene | 2.3 | | | | | | | | | | | | | | | | | | |
| *cis*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 211.6 | 1.19E+03 | 5.0 | ND | 5.0 | 9.5 | 6.3 | ND | 6.3 | 12.7 | 15.9 | ND | 15.9 | 32.2 |
| *trans*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 211.6 | 1.19E+03 | 5.0 | ND | 5.0 | 9.5 | 6.3 | ND | 6.3 | 12.7 | 15.9 | ND | 15.9 | 32.2 |
| Ethanol | | | | | | | | | | | | | | | | | | | |
| Ethyl acetate | | | | 3.29E+03 | nc | 1447136.6 | 5.52E+06 | | | | | | | | | | | | |
| Ethylbenzene | 2.2 | | | 1.06E+03 | nc | 466299.6 | 1.78E+06 | 32.1 | | 4.8 | 9.1 | 52.1 | | 6.1 | 12.1 | 28.2 | | 15.2 | 30.8 |
| n-Hexane | 4.1 | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | | | | | | | | | | | | |
| 2-Hexanone | 8.3 | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 22 | | | 8.62E-02 | ca | 38.0 | 2.14E+02 | 11.7 | ND | 11.7 | 22.4 | 14.9 | ND | 14.9 | 29.8 | 37.3 | ND | 37.3 | 75.7 |
| Isopropanol | 2.5 | | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 4.9 | | | 4.02E+02 | nc | 176872.2 | 6.75E+05 | | | | | | | | | | | | |
| Methyl acetate | 3.6 | | | 3.65E+03 | nc | 1607929.5 | 6.14E+06 | | | | | | | | | | | | |
| Methyl ethyl ketone | 1.5 | | | 5.11E+03 | nc | 2251101.3 | 8.59E+06 | | | | | | | | | | | | |
| Methyl isobutyl ketone (MIBK) | 2.1 | | | 3.14E+03 | nc | 1382819.4 | 5.28E+06 | | | | | | | | | | | | |
| Methyl-t-butyl ether | 3.6 | 4000.0 | 1.34E+04 | | | | | | | | | | | | | | | | |
| Methylcyclohexane | 4 | | | 3.13E+03 | nc | 1378225.3 | 5.26E+06 | | | | | | | | | | | | |
| Naphthalene | 5.3 | 31.9 | 1.06E+02 | | | | | | | | | | | | | | | | |
| n-Propylbenzene | 4.9 | | | 1.46E+02 | nc | 64317.2 | 2.45E+05 | | | | | | | | | | | | |
| Styrene | 2.2 | | | 1.06E+03 | nc | 466299.6 | 1.78E+06 | 4.7 | ND | 4.7 | 8.9 | 6.0 | ND | 6.0 | 11.9 | 14.9 | ND | 14.9 | 30.2 |
| 1,1,1,2-Tetrachloroethane | 6.9 | | | 2.60E-01 | ca | 114.4 | 6.43E+02 | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 3.5 | | | 3.31E-02 | ca | 14.6 | 8.21E+01 | 7.5 | ND | 7.5 | 14.4 | 9.6 | ND | 9.6 | 19.2 | **24.0** | ND | 24.0 | 48.7 |
| Tetrachloroethene (PCE) | 3.4 | 180.0 | 6.03E+02 | | | | | 23.7 | | 7.5 | 14.2 | 12.9 | | 9.5 | 19.0 | 50.8 | | 23.7 | 48.1 |

**SGRA3 (Primary)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 11.5 ft - 12 ft | | | | Depth: 18.5 ft - 19 ft | | | | Depth: 28.5 ft - 29 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL |
| Toluene | 1.9 | 135000.0 | 3.78E+05 | | | | | 124.3 | | 4.1 | 7.9 | 94.1 | | 5.3 | 10.5 | 143.1 | | 13.2 | 26.7 |
| 1,2,4-Trichlorobenzene | 1.5 | | | 3.65E+00 | nc | 1607.9 | 6.14E+03 | 8.2 | ND | 8.2 | 15.6 | 10.4 | ND | 10.4 | 20.8 | 26.0 | ND | 26.0 | 52.6 |
| 1,1,1-Trichloroethane | 2.5 | 991000.0 | 2.79E+06 | | | | | 6.0 | ND | 6.0 | 11.5 | 7.6 | ND | 7.6 | 15.3 | 19.1 | ND | 19.1 | 38.7 |
| 1,1,2-Trichloroethane | 2.8 | | | 1.20E-01 | ca | 52.9 | 2.98E+02 | 6.0 | ND | 6.0 | 11.5 | 7.6 | ND | 7.6 | 15.3 | 19.1 | ND | 19.1 | 38.7 |
| Trichloroethene (TCE) Cal-Modified PRG | 2.7 | 528.0 | 1.77E+03 | 9.61E-01 | ca5 | 423.1 | 2.38E+03 | 5.9 | ND | 5.9 | 11.3 | 7.5 | ND | 7.5 | 15.0 | 18.8 | ND | 18.8 | 38.1 |
| Trichlorofluoromethane (Freon 11) | 5.6 | | | 7.30E+02 | nc | 321585.9 | 1.23E+06 | 6.2 | ND | 6.2 | 11.8 | 7.9 | ND | 7.9 | 15.7 | 19.6 | ND | 19.6 | 39.9 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 8 | | | 3.13E+04 | nc | 13779955.9 | 5.26E+07 | 8.4 | ND | 8.4 | 16.1 | 10.7 | ND | 10.7 | 21.4 | 26.8 | ND | 26.8 | 54.4 |
| 1,2,4-Trimethylbenzene | | | | 6.21E+00 | nc | 2733.5 | 1.04E+04 | 19.2 | | 5.4 | 10.3 | 132.6 | | 6.9 | 13.8 | 17.2 | ND | 17.2 | 34.9 |
| 1,3,5-Trimethylbenzene | | | | 6.21E+00 | nc | 2733.5 | 1.04E+04 | 9.3 | | 5.4 | 10.3 | 68.8 | | 6.9 | 13.8 | 17.2 | ND | 17.2 | 34.9 |
| 2,2,4-Trimethylpentane | | | | | | | | | | | | | | | | | | | |
| Vinyl acetate | | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | | | | | | | | | | | | |
| Vinyl chloride | 1.3 | 13.3 | 4.48E+01 | | | | | 2.8 | ND | 2.8 | 5.4 | 3.6 | ND | 3.6 | 7.2 | 8.9 | ND | 8.9 | 18.1 |
| m,p-Xylene | 2.2 | 317000.0 | 8.87E+05 | | | | | 112.8 | | 9.1 | 18.2 | 169.2 | | 12.1 | 24.3 | 95.4 | | 30.8 | 60.7 |
| o-Xylene | 2.2 | 315000.0 | 8.79E+05 | | | | | 28.2 | | 4.8 | 9.1 | 82.4 | | 6.1 | 12.1 | 25.6 | | 15.2 | 30.8 |
| 1,4-Dioxane | 7.3 | | | 6.11E-01 | ca | 269.3 | 1.51E+03 | | | | | | | | | | | | |
| Butane,methyl- | | | | | | | | 256.5 | | | | | | | | | | | |
| Butene | | | | | | | | 128.4 | | | | | | | | | | | |
| Butene, -methyl- | | | | | | | | 151.9 | | | | | | | | | | | |
| Cyclohexane, ethylmethyl | | | | | | | | | | | | 558.4 | | | | | | | |
| Cyclohexane, tetramethyl | | | | | | | | | | | | 1777.0 | | | | | | | |
| Cyclohexane, trimethyl (01) | | | | | | | | | | | | 1599.3 | | | | | | | |
| Cyclohexane, trimethyl (02) | | | | | | | | | | | | 515.9 | | | | | | | |
| Heptane, ethylmethyl- | | | | | | | | | | | | 814.0 | | | | | | | |
| Indene, octahydro | | | | | | | | | | | | 609.2 | | | | | | | |
| Isobutane | | | | | | | | | | | | 1520.1 | | | | | | | |
| Pentane | | | | | | | | 294.9 | | | | | | | | 85.5 | | | |
| Pentene | | | | | | | | 458.6 | | | | | | | | 100.3 | | | |
| Propylene | | | | | | | | 2063.6 | | | | | | | | | | | |
| unknown[6] | | | | | | | | | | | | 96 | | | | 83 | | | |
| unknown[6] fluorocarbon (01) | | | | | | | | 680 | | | | | | | | 1300 | | | |
| unknown[6] fluorocarbon (02) | | | | | | | | 82 | | | | | | | | 92 | | | |
| unknown[6] fluorocarbon (03) | | | | | | | | | | | | | | | | 27 | | | |
| unknown[6] hydrocarbon (01) | | | | | | | | 86 | | | | | | | | | | | |
| unknown[6] hydrocarbon (02) | | | | | | | | 57 | | | | | | | | | | | |

Notes:

[1] Table 2, "Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties" (CalEPA, January 2005)

[2] EPA Region 9, "Preliminary Remediation Goals" (October 2004)

[3] Residential (Ambient Air PRG Based): Region 9 Ambient Air PRG divided by "alpha" (2.27E-03; Table 3,"Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soils, CalEPA OEHHA", 2005)

[4] Commercial/Industrial: Region 9 Ambient Air PRG was multiplied by 2.8 for carcinogens or 1.9 for noncarcinogens to estimate a Commercial/Industrial Worker PRG, which was then divided by the Commercial/Industrial "alpha" (e.g. 1.13E-03, which assumes a fully calibrated/maintained HVAC system; Table 3, CalEPA OEHHA, 2005)

[5] TCE: For the EPA NCEA Provisional Draft toxicity value the posted air concentrations would be towards the upper end of the risk management range of 1E-04.

[6] Unit of unknown analyte is ppvb.

[7] Nondetects (NDs) are posted at Method Detection Limit (MDL) as a proxy value.

[8] Bolded values are values that exceed a Residential CHHSL or a Residential soil gas screening level.

**SGRA4 (Primary)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 10.5 ft - 11 ft | | | | Depth: 18 ft - 18.5 ft | | | | Depth: 30.5 ft - 31 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL |
| Acetone | 4.8 | | | 3.30E+03 | nc | 1453744.5 | 5548672.6 | | | | | | | | | | | | |
| Benzene | 1.6 | 36.2 | 122.0 | | | | | 4.8 | | 3.5 | 7.3 | 24.3 | | 3.8 | 7.7 | 35.1 | ND | 35.1 | 67.0 |
| Bromobenzene | 6.4 | | | 1.00E+01 | nc | 4405.3 | 16814.2 | | | | | | | | | | | | |
| Bromodichloromethane | 3.4 | | | 1.10E-01 | ca | 48.5 | 272.6 | | | | | | | | | | | | |
| Bromoform | 5.2 | | | 1.75E+00 | ca | 769.3 | 4327.4 | | | | | | | | | | | | |
| Bromomethane | 2 | | | 5.21E+00 | nc | 2297.0 | 8767.4 | 4.3 | ND | 4.3 | 8.9 | 4.7 | ND | 4.7 | 9.3 | 42.7 | ND | 42.7 | 81.5 |
| Bromochloromethane | 3.4 | | | | | | | | | | | | | | | | | | |
| Butane (leak check compound) | 10000 | | | | | | | 33.3 | | | | 1401.3 | | | | 617.5 | | | |
| n-Butylbenzene | 5.5 | | | 1.46E+02 | nc | 64317.2 | 245486.7 | | | | | | | | | | | | |
| sec-Butylbenzene | 6 | | | 1.46E+02 | nc | 64317.2 | 245486.7 | | | | | | | | | | | | |
| Carbon disulfide | 1.6 | | | 7.30E+02 | nc | 321585.9 | 1227433.6 | | | | | | | | | | | | |
| Carbon tetrachloride | 3.2 | 25.1 | 84.6 | | | | | 6.9 | ND | 6.9 | 14.5 | 7.5 | ND | 7.5 | 15.1 | **69.1** | ND | 69.1 | 132.0 |
| Chlorobenzene | 2.3 | | | 6.21E+01 | nc | 27334.8 | 104331.9 | 5.1 | ND | 5.1 | 10.6 | 5.5 | ND | 5.5 | 11.0 | 50.6 | ND | 50.6 | 96.6 |
| Chloroethane | 1.3 | | | 2.32E+00 | ca | 1021.4 | 5745.0 | 2.9 | ND | 2.9 | 6.1 | 3.2 | ND | 3.2 | 6.3 | 29.0 | ND | 29.0 | 55.4 |
| Chloroform | 2.5 | | | 8.30E-02 | ca | 36.6 | 205.7 | 12.7 | | 5.4 | 11.2 | 31.2 | | 5.9 | 11.7 | **53.7** | ND | 53.7 | 102.5 |
| Chloromethane | 4.2 | | | 9.49E+01 | nc | 41806.2 | 159566.4 | 2.3 | ND | 2.3 | 4.7 | 2.5 | ND | 2.5 | 5.0 | 22.7 | ND | 22.7 | 43.3 |
| 2-Chlorotoluene | 4.5 | | | 7.30E+01 | nc | 32158.6 | 122743.4 | | | | | | | | | | | | |
| 4-Chlorotoluene | 4.5 | | | | | | | | | | | | | | | | | | |
| Cyclohexane | 1.7 | | | 6.21E+03 | nc | 2733480.2 | 10433185.8 | | | | | | | | | | | | |
| Dibromochloromethane | 4.3 | | | 8.00E-02 | ca | 35.3 | 198.3 | | | | | | | | | | | | |
| Dibromochloropropane (DBCP) | 9.7 | | | 2.09E-01 | nc | 91.9 | 350.7 | | | | | | | | | | | | |
| Dibromomethane | | | | 3.65E+01 | nc | 16079.3 | 61371.7 | | | | | | | | | | | | |
| 1,2-Dibromoethane | 3.9 | | | 3.40E-03 | ca | 1.5 | 8.4 | **8.4** | ND | 8.4 | 17.7 | **9.2** | ND | 9.2 | 18.4 | **84.4** | ND | 84.4 | 161.2 |
| 1,2-Dichloro-Tetrafluoroethane | 6.3 | | | | | | | 7.7 | ND | 7.7 | 16.1 | 8.4 | ND | 8.4 | 16.8 | 76.8 | ND | 76.8 | 146.7 |
| 1,2-Dichlorobenzene | 3 | | | 2.09E+02 | nc | 91881.7 | 350695.3 | 6.6 | ND | 6.6 | 13.8 | 7.2 | ND | 7.2 | 14.4 | 66.1 | ND | 66.1 | 126.2 |
| 1,3-Dichlorobenzene | 3 | | | 1.10E+02 | nc | 48237.9 | 184115.0 | 6.6 | ND | 6.6 | 13.8 | 7.2 | ND | 7.2 | 14.4 | 66.1 | ND | 66.1 | 126.2 |
| 1,4-Dichlorobenzene | 3 | | | 3.06E-01 | ca | 134.6 | 757.3 | 6.6 | ND | 6.6 | 13.8 | 7.2 | ND | 7.2 | 14.4 | 66.1 | ND | 66.1 | 126.2 |
| Dichlorodifluoromethane (Freon 12) | 2.5 | | | 2.09E+02 | nc | 91881.7 | 350695.3 | 5.4 | ND | 5.4 | 11.4 | 5.9 | ND | 5.9 | 11.9 | 54.4 | ND | 54.4 | 103.8 |
| 1,1-Dichloroethane | 2 | | | 5.21E+02 | nc | 229704.2 | 876738.3 | 4.4 | ND | 4.4 | 9.3 | 4.9 | ND | 4.9 | 9.7 | 44.5 | ND | 44.5 | 84.9 |
| 1,2-Dichloroethane | 2 | 49.6 | 167.0 | | | | | 4.4 | ND | 4.4 | 9.3 | 4.9 | ND | 4.9 | 9.7 | 44.5 | ND | 44.5 | 84.9 |
| 1,1-Dichloroethene | 2 | | | 2.08E+02 | nc | 91652.0 | 349818.6 | 4.4 | ND | 4.4 | 9.1 | 4.8 | ND | 4.8 | 9.5 | 43.6 | ND | 43.6 | 83.2 |
| *cis*-1,2-Dichloroethene | 2 | 15900.0 | 44400.0 | | | | | 4.4 | ND | 4.4 | 9.1 | 4.8 | ND | 4.8 | 9.5 | 43.6 | ND | 43.6 | 83.2 |
| *trans*-1,2-Dichloroethene | 2 | 31900.0 | 88700.0 | | | | | | | | | | | | | | | | |
| Dichloromethane (Methylene chloride) | 1.8 | | | 4.09E+00 | ca | 1800.6 | 10127.9 | 3.8 | ND | 3.8 | 8.0 | 4.2 | ND | 4.2 | 8.3 | 38.2 | ND | 38.2 | 72.9 |
| 1,2-Dichloropropane | 2.3 | | | 9.89E-02 | ca | 43.6 | 245.0 | 5.1 | ND | 5.1 | 10.6 | 5.5 | ND | 5.5 | 11.1 | 50.8 | ND | 50.8 | 97.0 |
| 1,3-Dichloropropane | 2.3 | | | 7.30E+01 | nc | 32158.6 | 122743.4 | | | | | | | | | | | | |
| 2,2-Dichloropropane | 2.3 | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloropropene | 2.3 | | | | | | | | | | | | | | | | | | |
| *cis*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 211.6 | 1190.0 | 5.0 | ND | 5.0 | 10.4 | 5.4 | ND | 5.4 | 10.9 | 49.9 | ND | 49.9 | 95.2 |
| *trans*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 211.6 | 1190.0 | 5.0 | ND | 5.0 | 10.4 | 5.4 | ND | 5.4 | 10.9 | 49.9 | ND | 49.9 | 95.2 |
| Ethanol | | | | | | | | | | | | | | | | | | | |
| Ethyl acetate | | | | 3.29E+03 | nc | 1447136.6 | 5523451.3 | | | | | | | | | | | | |
| Ethylbenzene | 2.2 | | | 1.06E+03 | nc | 466299.6 | 1779778.8 | 12.1 | | 4.8 | 10.0 | 35.1 | | 5.2 | 10.4 | 47.7 | ND | 47.7 | 91.1 |
| n-Hexane | 4.1 | | | 2.09E+02 | nc | 91881.7 | 350695.3 | | | | | | | | | | | | |
| 2-Hexanone | 8.3 | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 22 | | | 8.62E-02 | ca | 38.0 | 213.6 | 11.7 | ND | 11.7 | 24.5 | 12.8 | ND | 12.8 | 25.6 | **117.2** | ND | 117.2 | 223.8 |
| Isopropanol | 2.5 | | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 4.9 | | | 4.02E+02 | nc | 176872.2 | 675088.5 | | | | | | | | | | | | |
| Methyl acetate | 3.6 | | | 3.65E+03 | nc | 1607929.5 | 6137168.1 | | | | | | | | | | | | |
| Methyl ethyl ketone | 1.5 | | | 5.11E+03 | nc | 2251101.3 | 8592035.4 | | | | | | | | | | | | |
| Methyl isobutyl ketone (MIBK) | 2.1 | | | 3.14E+03 | nc | 1382819.4 | 5277964.6 | | | | | | | | | | | | |
| Methyl-t-butyl ether | 3.6 | 4000.0 | 13400.0 | | | | | | | | | | | | | | | | |
| Methylcyclohexane | 4 | | | 3.13E+03 | nc | 1378225.3 | 5260429.8 | | | | | | | | | | | | |
| Naphthalene | 5.3 | 31.9 | 106.0 | | | | | | | | | | | | | | | | |

**SGRA4 (Primary)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 10.5 ft - 11 ft | | | | Depth: 18 ft - 18.5 ft | | | | Depth: 30.5 ft - 31 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL | Result | Non-Detected (ND)[7] | MDL | RL |
| n-Propylbenzene | 4.9 | | | 1.46E+02 | nc | 64317.2 | 245486.7 | | | | | | | | | | | | |
| Styrene | 2.2 | | | 1.06E+03 | nc | 466299.6 | 1779778.8 | 4.7 | ND | 4.7 | 9.8 | 5.1 | ND | 5.1 | 10.2 | 46.8 | ND | 46.8 | 89.4 |
| 1,1,1,2-Tetrachloroethane | 6.9 | | | 2.60E-01 | ca | 114.4 | 643.3 | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 3.5 | | | 3.31E-02 | ca | 14.6 | 82.1 | 7.5 | ND | 7.5 | 15.8 | 8.2 | ND | 8.2 | 16.5 | **75.5** | ND | 75.5 | 144.0 |
| Tetrachloroethene (PCE) | 3.4 | 180.0 | 603.0 | | | | | 122.0 | | 7.5 | 15.6 | 61.7 | | 8.1 | 16.3 | 155.9 | | 74.5 | 142.3 |
| Toluene | 1.9 | 135000.0 | 378000.0 | | | | | 33.9 | | 4.1 | 8.7 | 139.3 | | 4.5 | 9.0 | 146.9 | | 41.4 | 79.1 |
| 1,2,4-Trichlorobenzene | 1.5 | | | 3.65E+00 | nc | 1607.9 | 6137.2 | 8.2 | ND | 8.2 | 17.1 | 8.9 | ND | 8.9 | 17.8 | 81.6 | ND | 81.6 | 155.7 |
| 1,1,1-Trichloroethane | 2.5 | 991000.0 | 2790000.0 | | | | | 6.0 | ND | 6.0 | 12.5 | 6.5 | ND | 6.5 | 13.1 | 60.0 | ND | 60.0 | 114.5 |
| 1,1,2-Trichloroethane | 2.8 | | | 1.20E-01 | ca | 52.9 | 297.5 | 6.0 | ND | 6.0 | 12.5 | 6.5 | ND | 6.5 | 13.1 | 60.0 | ND | 60.0 | 114.5 |
| Trichloroethene (TCE) Cal-Modified PRG | 2.7 | 528.0 | 1770.0 | 9.61E-01 | ca5 | 423.1 | 2380.1 | 12.3 | | 5.9 | 12.3 | 6.4 | ND | 6.4 | 12.9 | 64.4 | | 59.1 | 112.8 |
| Trichlorofluoromethane (Freon 11) | 5.6 | | | 7.30E+02 | nc | 321585.9 | 1227433.6 | 6.7 | | 6.2 | 12.9 | 6.7 | ND | 6.7 | 13.5 | 61.8 | ND | 61.8 | 117.9 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 8 | | | 3.13E+04 | nc | 13779955.9 | 52595531.0 | 46.7 | | 8.4 | 17.6 | 107.2 | | 9.2 | 18.4 | 359.9 | | 84.2 | 160.8 |
| 1,2,4-Trimethylbenzene | | | | 6.21E+00 | nc | 2733.5 | 10433.2 | 13.3 | | 5.4 | 11.3 | 30.9 | | 5.9 | 11.8 | 54.0 | ND | 54.0 | 103.1 |
| 1,3,5-Trimethylbenzene | | | | 6.21E+00 | nc | 2733.5 | 10433.2 | 6.9 | | 5.4 | 11.3 | 20.1 | | 5.9 | 11.8 | 54.0 | ND | 54.0 | 103.1 |
| 2,2,4-Trimethylpentane | | | | | | | | | | | | | | | | | | | |
| Vinyl acetate | | | | 2.09E+02 | nc | 91881.7 | 350695.3 | | | | | | | | | | | | |
| Vinyl chloride | 1.3 | 13.3 | 44.8 | | | | | 2.8 | ND | 2.8 | 5.9 | 3.1 | ND | 3.1 | 6.1 | **28.1** | ND | 28.1 | 53.6 |
| m,p-Xylene | 2.2 | 317000.0 | 887000.0 | | | | | 42.5 | | 10.0 | 20.0 | 112.8 | | 10.4 | 21.3 | 160.5 | | 91.1 | 186.6 |
| o-Xylene | 2.2 | 315000.0 | 879000.0 | | | | | 12.6 | | 4.8 | 10.0 | 36.4 | | 5.2 | 10.4 | 47.7 | ND | 47.7 | 91.1 |
| 1,4-Dioxane | 7.3 | | | 6.11E-01 | ca | 269.3 | 1514.6 | | | | | | | | | | | | |
| Butane, methyl | | | | | | | | | | | | 109.1 | | | | | | | |
| Butene | | | | | | | | | | | | 52.7 | | | | | | | |
| Isobutane | | | | | | | | | | | | 83.1 | | | | | | | |
| Pentane | | | | | | | | | | | | 120.9 | | | | | | | |
| Pentene | | | | | | | | | | | | 131.8 | | | | | | | |
| Propene, methyl | | | | | | | | 14.2 | | | | | | | | | | | |
| unknown[6] Fluorocarbon | | | | | | | | | | | | 30 | | | | | | | |
| unknown[6] hydrocarbon | | | | | | | | 6.8 | | | | | | | | | | | |
| unknown[6] hydrocarbon (01) | | | | | | | | | | | | 34 | | | | | | | |
| unknown[6] hydrocarbon (02) | | | | | | | | | | | | 24 | | | | | | | |
| unknown[6] Fluorocarbon (01) | | | | | | | | 9.1 | | | | | | | | | | | |
| unknown[6] Fluorocarbon (02) | | | | | | | | 8.2 | | | | | | | | | | | |
| unknown[6] Fluorocarbon (03) | | | | | | | | 7.3 | | | | | | | | | | | |
| unknown[6] Fluorocarbon (04) | | | | | | | | 19 | | | | | | | | | | | |

Notes:

[1] Table 2, "Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties" (CalEPA, January 2005)

[2] EPA Region 9, "Preliminary Remediation Goals" (October 2004)

[3] Residential (Ambient Air PRG Based): Region 9 Ambient Air PRG divided by "alpha" (2.27E-03; Table 3,"Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soils, CalEPA OEHHA", 2005)

[4] Commercial/Industrial: Region 9 Ambient Air PRG was multiplied by 2.8 for carcinogens or 1.9 for noncarcinogens to estimate a Commercial/Industrial Worker PRG, which was then divided by the Commercial/Industrial "alpha" (e.g. 1.13E-03, which assumes a fully calibrated/maintained HVAC system; Table 3, CalEPA OEHHA, 2005)

[5] TCE: For the EPA NCEA Provisional Draft toxicity value the posted air concentrations would be towards the upper end of the risk management range of 1E-04.

[6] Unit of unknown analyte is ppvb.

[7] Nondetects (NDs) are posted at Method Detection Limit (MDL) as a proxy value.

[8] Bolded values are values that exceed a Residential CHHSL or a Residential soil gas screening level.

**SGRA4 (Field Duplicate)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (μg/m³) | | | | | | | Lab Results (μg/m³) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 10.5 ft - 11 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: μg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL |
| Acetone | 4.8 | | | 3.30E+03 | nc | 1453744.5 | 5.55E+06 | | | | |
| Benzene | 1.6 | 36.2 | 1.22E+02 | | | | | 3.8 | | 3.5 | 6.7 |
| Bromobenzene | 6.4 | | | 1.00E+01 | nc | 4405.3 | 1.68E+04 | | | | |
| Bromodichloromethane | 3.4 | | | 1.10E-01 | ca | 48.5 | 2.73E+02 | | | | |
| Bromoform | 5.2 | | | 1.75E+00 | ca | 769.3 | 4.33E+03 | | | | |
| Bromomethane | 2 | | | 5.21E+00 | nc | 2297.0 | 8.77E+03 | 4.3 | ND | 4.3 | 8.1 |
| Bromochloromethane | 3.4 | | | | | | | | | | |
| Butane (leak check compound) | 10000 | | | | | | | 28.5 | | | |
| n-Butylbenzene | 5.5 | | | 1.46E+02 | nc | 64317.2 | 2.45E+05 | | | | |
| sec-Butylbenzene | 6 | | | 1.46E+02 | nc | 64317.2 | 2.45E+05 | | | | |
| Carbon disulfide | 1.6 | | | 7.30E+02 | nc | 321585.9 | 1.23E+06 | | | | |
| Carbon tetrachloride | 3.2 | 25.1 | 8.46E+01 | | | | | 6.9 | ND | 6.9 | 13.2 |
| Chlorobenzene | 2.3 | | | 6.21E+01 | nc | 27334.8 | 1.04E+05 | 5.1 | ND | 5.1 | 9.7 |
| Chloroethane | 1.3 | | | 2.32E+00 | ca | 1021.4 | 5.74E+03 | 2.9 | ND | 2.9 | 5.5 |
| Chloroform | 2.5 | | | 8.30E-02 | ca | 36.6 | 2.06E+02 | 9.8 | | 5.4 | 10.2 |
| Chloromethane | 4.2 | | | 9.49E+01 | nc | 41806.2 | 1.60E+05 | 2.3 | ND | 2.3 | 4.3 |
| 2-Chlorotoluene | 4.5 | | | 7.30E+01 | nc | 32158.6 | 1.23E+05 | | | | |
| 4-Chlorotoluene | 4.5 | | | | | | | | | | |
| Cyclohexane | 1.7 | | | 6.21E+03 | nc | 2733480.2 | 1.04E+07 | | | | |
| Dibromochloromethane | 4.3 | | | 8.00E-02 | ca | 35.3 | 1.98E+02 | | | | |
| Dibromochloropropane (DBCP) | 9.7 | | | 2.09E-01 | nc | 91.9 | 3.51E+02 | | | | |
| Dibromomethane | | | | 3.65E+01 | nc | 16079.3 | 6.14E+04 | | | | |
| 1,2-Dibromoethane | 3.9 | | | 3.40E-03 | ca | 1.5 | 8.42E+00 | **8.4** | ND | 8.4 | 16.1 |
| 1,2-Dichloro-Tetrafluoroethane | 6.3 | | | | | | | 7.7 | ND | 7.7 | 14.7 |
| 1,2-Dichlorobenzene | 3 | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | 6.6 | ND | 6.6 | 12.6 |
| 1,3-Dichlorobenzene | 3 | | | 1.10E+02 | nc | 48237.9 | 1.84E+05 | 6.6 | ND | 6.6 | 12.6 |
| 1,4-Dichlorobenzene | 3 | | | 3.06E-01 | ca | 134.6 | 7.57E+02 | 6.6 | ND | 6.6 | 12.6 |
| Dichlorodifluoromethane (Freon 12) | 2.5 | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | 5.4 | ND | 5.4 | 10.4 |
| 1,1-Dichloroethane | 2 | | | 5.21E+02 | nc | 229704.2 | 8.77E+05 | 4.4 | ND | 4.4 | 8.5 |
| 1,2-Dichloroethane | 2 | 49.6 | 1.67E+02 | | | | | 4.4 | ND | 4.4 | 8.5 |
| 1,1-Dichloroethene | 2 | | | 2.08E+02 | nc | 91652.0 | 3.50E+05 | 4.4 | ND | 4.4 | 8.3 |
| *cis*-1,2-Dichloroethene | 2 | 15900.0 | 4.44E+04 | | | | | 4.4 | ND | 4.4 | 8.3 |
| *trans*-1,2-Dichloroethene | 2 | 31900.0 | 8.87E+04 | | | | | | | | |
| Dichloromethane (Methylene chloride) | 1.8 | | | 4.09E+00 | ca | 1800.6 | 1.01E+04 | 3.8 | ND | 3.8 | 7.3 |
| 1,2-Dichloropropane | 2.3 | | | 9.89E-02 | ca | 43.6 | 2.45E+02 | 5.1 | ND | 5.1 | 9.7 |
| 1,3-Dichloropropane | 2.3 | | | 7.30E+01 | nc | 32158.6 | 1.23E+05 | | | | |
| 2,2-Dichloropropane | 2.3 | | | | | | | | | | |
| 1,1-Dichloropropene | 2.3 | | | | | | | | | | |
| *cis*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 211.6 | 1.19E+03 | 5.0 | ND | 5.0 | 9.5 |
| *trans*-1,3-Dichloropropene | 2.3 | | | 4.80E-01 | ca | 211.6 | 1.19E+03 | 5.0 | ND | 5.0 | 9.5 |
| Ethanol | | | | | | | | | | | |
| Ethyl acetate | | | | 3.29E+03 | nc | 1447136.6 | 5.52E+06 | | | | |
| Ethylbenzene | 2.2 | | | 1.06E+03 | nc | 466299.6 | 1.78E+06 | 9.5 | | 4.8 | 9.1 |
| n-Hexane | 4.1 | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | | | | |
| 2-Hexanone | 8.3 | | | | | | | | | | |
| Hexachlorobutadiene | 22 | | | 8.62E-02 | ca | 38.0 | 2.14E+02 | 11.7 | ND | 11.7 | 22.4 |
| Isopropanol | 2.5 | | | | | | | | | | |
| Isopropylbenzene | 4.9 | | | 4.02E+02 | nc | 176872.2 | 6.75E+05 | | | | |
| Methyl acetate | 3.6 | | | 3.65E+03 | nc | 1607929.5 | 6.14E+06 | | | | |
| Methyl ethyl ketone | 1.5 | | | 5.11E+03 | nc | 2251101.3 | 8.59E+06 | | | | |
| Methyl isobutyl ketone (MIBK) | 2.1 | | | 3.14E+03 | nc | 1382819.4 | 5.28E+06 | | | | |
| Methyl-t-butyl ether | 3.6 | 4000.0 | 1.34E+04 | | | | | | | | |
| Methylcyclohexane | 4 | | | 3.13E+03 | nc | 1378225.3 | 5.26E+06 | | | | |

**SGRA4 (Field Duplicate)**

Soil Gas Samples at the Residential Study Area - Whispering Fountains Apartment.

Comparisons of Analytical Parameters of Laboratory Results and Reporting Limits, and Environmental Screening Levels.

| Parameter to be Analyzed | Soil Gas Screening Levels (µg/m³) | | | | | | | Lab Results (µg/m³) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Depth: 10.5 ft - 11 ft | | | |
| TCL VOCs | Required Reporting Limit (unit: µg/m³) | Residential CHHSLs[1] | Commercial/ Industrial CHHSLs[1] | Region 9 Ambient Air PRG (2004)[2] | cancer/ noncancer (ca/nc) | Residential (Based on Region 9 Ambient Air PRG)[3] | Commercial/Industrial (Based on Region 9 Ambient Air PRG)[4] | Result | Non-Detected (ND)[7] | MDL | RL |
| Naphthalene | 5.3 | 31.9 | 1.06E+02 | | | | | | | | |
| n-Propylbenzene | 4.9 | | | 1.46E+02 | nc | 64317.2 | 2.45E+05 | | | | |
| Styrene | 2.2 | | | 1.06E+03 | nc | 466299.6 | 1.78E+06 | 4.7 | ND | 4.7 | 8.9 |
| 1,1,1,2-Tetrachloroethane | 6.9 | | | 2.60E-01 | ca | 114.4 | 6.43E+02 | | | | |
| 1,1,2,2-Tetrachloroethane | 3.5 | | | 3.31E-02 | ca | 14.6 | 8.21E+01 | 7.5 | ND | 7.5 | 14.4 |
| Tetrachloroethene (PCE) | 3.4 | 180.0 | 6.03E+02 | | | | | 108.4 | | 7.5 | 14.2 |
| Toluene | 1.9 | 135000.0 | 3.78E+05 | | | | | 26.7 | | 4.1 | 7.9 |
| 1,2,4-Trichlorobenzene | 1.5 | | | 3.65E+00 | nc | 1607.9 | 6.14E+03 | 8.2 | ND | 8.2 | 15.6 |
| 1,1,1-Trichloroethane | 2.5 | 991000.0 | 2.79E+06 | | | | | 6.0 | ND | 6.0 | 11.5 |
| 1,1,2-Trichloroethane | 2.8 | | | 1.20E-01 | ca | 52.9 | 2.98E+02 | 6.0 | ND | 6.0 | 11.5 |
| Trichloroethene (TCE) Cal-Modified PRG | 2.7 | 528.0 | 1.77E+03 | 9.61E-01 | ca[5] | 423.1 | 2.38E+03 | 8.1 | | 5.9 | 11.3 |
| Trichlorofluoromethane (Freon 11) | 5.6 | | | 7.30E+02 | nc | 321585.9 | 1.23E+06 | 6.2 | ND | 6.2 | 11.8 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 8 | | | 3.13E+04 | nc | 13779955.9 | 5.26E+07 | 36.8 | | 8.4 | 16.1 |
| 1,2,4-Trimethylbenzene | | | | 6.21E+00 | nc | 2733.5 | 1.04E+04 | 10.8 | | 5.4 | 10.3 |
| 1,3,5-Trimethylbenzene | | | | 6.21E+00 | nc | 2733.5 | 1.04E+04 | 5.4 | ND | 5.4 | 10.3 |
| 2,2,4-Trimethylpentane | | | | | | | | | | | |
| Vinyl acetate | | | | 2.09E+02 | nc | 91881.7 | 3.51E+05 | | | | |
| Vinyl chloride | 1.3 | 13.3 | 4.48E+01 | | | | | 2.8 | ND | 2.8 | 5.4 |
| m,p-Xylene | 2.2 | 317000.0 | 8.87E+05 | | | | | 33.8 | | 9.1 | 18.2 |
| o-Xylene | 2.2 | 315000.0 | 8.79E+05 | | | | | 10.4 | | 4.8 | 9.1 |
| 1,4-Dioxane | 7.3 | | | 6.11E-01 | ca | 269.3 | 1.51E+03 | | | | |
| unknown[6] fluorocarbon (02) | | | | | | | | 12 | | | |
| unknown[6] fluorocarbon (01) | | | | | | | | 9.8 | | | |
| unknown[6] fluorocarbon (03) | | | | | | | | 8 | | | |
| unknown[6] fluorocarbon (04) | | | | | | | | 16 | | | |
| unknown[6] | | | | | | | | 8.4 | | | |

Notes:

[1] Table 2, "Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties" (CalEPA, January 2005)

[2] EPA Region 9, "Preliminary Remediation Goals" (October 2004)

[3] Residential (Ambient Air PRG Based): Region 9 Ambient Air PRG divided by "alpha" (2.27E-03; Table 3,"Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soils, CalEPA OEHHA", 2005)

[4] Commercial/Industrial: Region 9 Ambient Air PRG was multiplied by 2.8 for carcinogens or 1.9 for noncarcinogens to estimate a Commercial/Industrial Worker PRG, which was then divided by the Commercial/Industrial "alpha" (e.g. 1.13E-03, which assumes a fully calibrated/maintained HVAC system; Table 3, CalEPA OEHHA, 2005)

[5] TCE: For the EPA NCEA Provisional Draft toxicity value the posted air concentrations would be towards the upper end of the risk management range of 1E-04.

[6] Unit of unknown analyte is ppvb.

[7] Nondetects (NDs) are posted at Method Detection Limit (MDL) as a proxy value.

[8] Bolded values are values that exceed a Residential CHHSL or a Residential soil gas screening level.

# Groundwater Hydropunch Data

**ANALYTICAL RESULTS - Trace Level Water Samples for Trace Volatiles (µg/l)**
**Omega Chemical OU2 - Whispering Fountains Hydropunch Sampling**

| Sample ID : | OC2-HPRA1A-W-0-279 (Primary) | | OC2-HPRA1B-W-0-280 (Primary) | | OC2-HPRA1B-W-1-281 (Field Duplicate) | | OC2-HPRA2A-W-0-277 (Primary) | | OC2-HPRA2B-W-0-278 (Primary) | | OC2-HPRA3A-W-0-275 (Primary) | | OC2-HPRA3B-W-0-276 (Primary) | | OC2-HPRA4A-W-0-284 (Primary) | | OC2-HPRA4B-W-5-285 (Primary) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CLP ID: | Y34B4 | | Y34B5 | | Y34B6 | | Y34B2 | | Y34B3 | | Y34B0 | | Y34B1 | | Y34B9 | | Y34C0 | |
| Depth (ft) : | 40-43 | | 50-53 | | 50-53 | | 40-43 | | 50-53 | | 47-50 | | 57-60 | | 44-47 | | 54-57 | |
| Collection Date : | 1/10/2007 | | 1/10/2007 | | 1/10/2007 | | 1/9/2007 | | 1/9/2007 | | 1/9/2007 | | 1/9/2007 | | 1/10/2007 | | 1/10/2007 | |
| Dilution Factor : | 1.0 | | 2.0 | | 2.0 | | 1.0 | | 2.0 | | 1.0 | | 2.0 | | 1.0 | | 1.0 | |
| Trace Volatiles | Result | Val | Result | Val | Result | Val | Result | Val | Result | Val | Result | Val | Result | Val | Result | Val | Result | Val |
| Dichlorodifluoromethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Chloromethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Vinyl chloride | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Bromomethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Chloroethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Trichlorofluoromethane | 0.50U | U | 0.60J | J | 0.63J | J | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.14J | J | 15 | J |
| 1,1-Dichloroethene | 0.68 | | 14 | | 14 | | 0.50U | U | 11 | | 0.50U | U | 14 | | 0.50U | U | 12 | J |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.50U | U | 2.9 | | 3.0 | | 0.50U | U | 1.0U | U | 0.50U | U | 0.54J | J | 0.35J | J | 39D | J |
| Acetone | 5.0U | U | 10U | U | 10U | U | 5.0U | U | 10U | U | 5.0U | U | 10U | U | 5.0U | U | 5.0U | U |
| Carbon disulfide | 0.14J | J | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Methyl acetate | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | UJ |
| Methylene chloride | 0.50U | U | 1.0J | U | 1.0J | U | 0.50J | U | 1.0J | U | 0.50U | U | 1.0J | U | 0.50U | U | 0.50U | UJ |
| trans-1,2-Dichloroethene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.21J | J |
| Methyl tert-butyl ether | 0.50U | U | 0.42J | J | 0.41J | J | 0.50U | U | 0.48J | J | 0.50U | U | 0.49J | J | 0.50U | U | 0.50U | UJ |
| 1,1-Dichloroethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| cis-1,2-Dichloroethene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 3.8 | J |
| 2-Butanone | 5.0U | U | 10U | U | 10U | U | 5.0U | U | 10U | U | 5.0U | U | 10U | U | 5.0U | U | 5.0U | U |
| Bromochloromethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Chloroform | 0.50U | U | 1.1 | | 1.1 | | 1.1 | | 0.93J | J | 0.50U | U | 0.98J | J | 0.22J | J | 1.8 | |
| 1,1,1-Trichloroethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | UJ |
| Cyclohexane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Carbon tetrachloride | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | UJ |
| Benzene | 0.14J | J | 1.0U | U | 1.0U | U | 0.17J | J | 1.0U | U | 0.50U | U | 1.0U | U | 0.24J | J | 0.50U | U |
| 1,2-Dichloroethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | UJ |
| 1,4-Dioxane[1] | 2.0U | R | 2.0U | R | 2.0U | R | 2.0U | R | 2.0U | R | 2.0U | R | 2.0U | R | 2.0U | R | 1.4J | J |
| Trichloroethene | 18 | | 330D | | 310D | | 0.86 | | 260D | | 0.50J | U | 230D | | 7.3 | | 140D | |
| Methylcyclohexane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 1,2-Dichloropropane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Bromodichloromethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.27J | J | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.14J | J |
| cis-1,3-Dichloropropene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 4-Methyl-2-Pentanone | 5.0U | U | 10U | U | 10U | U | 5.0U | U | 10U | U | 5.0U | U | 10U | U | 5.0U | U | 5.0U | U |
| Toluene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.15J | J | 0.50U | U |
| trans-1,3-Dichloropropene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 1,1,2-Trichloroethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Tetrachloroethene | 2.5 | | 24 | | 24 | | 0.62 | | 21 | | 0.50J | U | 24 | | 1.7 | | 90D | |
| 2-Hexanone | 5.0U | U | 10U | U | 10U | U | 5.0U | U | 10U | U | 5.0U | U | 10U | U | 5.0U | U | 5.0U | U |
| Dibromochloromethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 1,2-Dibromoethane[1] | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U |
| Chlorobenzene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Ethylbenzene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| o-Xylene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| m,p-Xylene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Styrene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Bromoform | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| Isopropylbenzene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 1,1,2,2-Tetrachloroethane | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 1,3-Dichlorobenzene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 1,4-Dichlorobenzene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 1,2-Dichlorobenzene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 1,2-Dibromo-3-chloropropane[1] | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U | 0.050U | U |
| 1,2,4-Trichlorobenzene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |
| 1,2,3-Trichlorobenzene | 0.50U | U | 1.0U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 1.0U | U | 0.50U | U | 0.50U | U |

**Notes:**

Val - Validity. Refer to Data Qualifiers to the left.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation LImit
N/A - Not Applicable
NA - Not Analyzed
D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank,
TB - Trip Blank, BG - Background Sample
[1] - Samples are Analyzed by Volatiles Secondary Ion Monitoring (SIM, ug/l)

**Data Qualifiers**

B : Analyte found in associated method blank as well as in sample
BD : Analyte found in assoc method blank as well as in sample; detect assoc with dilution sample
BJD : Estimated below detection and detection associated with sample dilution
D : Detection associated with sample dilution
E : Estimated value; Concentration exceeds upper level of instrument calibration range
EB : Estimated value; analyte found in associated method blank as well as in sample
J : Estimated Value
J+ : Estimated and MSA correlation coefficient <0.995 (ILM4)
J- : Estimated and
JB : Estimated Detected in Method Blank
JD : Estimated Value, detection associated with sample dilution
R : Unusable
U : Undetected

# Johnson and Ettinger Model Input/Output Files

Johnson and Ettinger Model Input/Output Sheets

- SGRA-1, 12.5 ft bgs
- SGRA-1, 21.5 ft bgs
- SGRA-1, 31.5 ft bgs
- SGRA-2, 7 ft bgs
- SGRA-2, 12.5 ft bgs
- SGRA-2, 28.5 ft bgs
- SGRA-3, 11.5 ft bgs
- SGRA-3, 18.5 ft bgs
- SGRA-3, 28.5 ft bgs
- SGRA-4, 10.5 ft bgs
- SGRA-4, 18 ft bgs
- SGRA-4, 30.5 ft bgs

**SGRA-1, 12.5 ft bgs**

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Toluene
  - VLookup Tables

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, 1,2,4-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 4.81E+01 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 7.0E-04 |

MESSAGE SUMMARY BELOW:

END

VLOOKUP TABLES

Soil Properties Lookup Table

| SCS Soil Type | $K_s$ (cm/h) | $\alpha_1$ (1/cm) | N (unitless) | M (unitless) | n ($cm^3/cm^3$) | $\theta_r$ ($cm^3/cm^3$) | Mean Grain Diameter (cm) | Bulk Density (g/cm3) | $\theta_w$ ($cm^3/cm^3$) | SCS Soil Name |
|---|---|---|---|---|---|---|---|---|---|---|
| C | 0.61 | 0.01496 | 1.253 | 0.2019 | 0.459 | 0.098 | 0.0092 | 1.43 | 0.215 | Clay |
| CL | 0.34 | 0.01581 | 1.416 | 0.2938 | 0.442 | 0.079 | 0.016 | 1.48 | 0.168 | Clay Loam |
| L | 0.50 | 0.01112 | 1.472 | 0.3207 | 0.399 | 0.061 | 0.020 | 1.59 | 0.148 | Loam |
| LS | 4.38 | 0.03475 | 1.746 | 0.4273 | 0.390 | 0.049 | 0.040 | 1.62 | 0.076 | Loamy Sand |
| S | 26.78 | 0.03524 | 3.177 | 0.6852 | 0.375 | 0.053 | 0.044 | 1.66 | 0.054 | Sand |
| SC | 0.47 | 0.03342 | 1.208 | 0.1722 | 0.385 | 0.117 | 0.025 | 1.63 | 0.197 | Sandy Clay |
| SCL | 0.55 | 0.02109 | 1.330 | 0.2481 | 0.384 | 0.063 | 0.029 | 1.63 | 0.146 | Sandy Clay Loam |
| SI | 1.82 | 0.00658 | 1.679 | 0.4044 | 0.489 | 0.050 | 0.0046 | 1.35 | 0.167 | Silt |
| SIC | 0.40 | 0.01622 | 1.321 | 0.2430 | 0.481 | 0.111 | 0.0039 | 1.38 | 0.216 | Silty Clay |
| SICL | 0.46 | 0.00839 | 1.521 | 0.3425 | 0.482 | 0.090 | 0.0056 | 1.37 | 0.198 | Silty Clay Loam |
| SIL | 0.76 | 0.00506 | 1.663 | 0.3987 | 0.439 | 0.065 | 0.011 | 1.49 | 0.180 | Silt Loam |
| SL | 1.60 | 0.02667 | 1.449 | 0.3099 | 0.387 | 0.039 | 0.030 | 1.62 | 0.103 | Sandy Loam |

Chemical Properties Lookup Table

| CAS No. | Chemical | Organic carbon partition coefficient, $K_{oc}$ ($cm^3/g$) | Diffusivity in air, $D_a$ ($cm^2/s$) | Diffusivity in water, $D_w$ ($cm^2/s$) | Pure component water solubility, S (mg/L) | Henry's law constant H' (unitless) | Henry's law constant at reference temperature, H (atm-$m^3$/mol) | Henry's law constant reference temperature, $T_R$ (°C) | Normal boiling point, $T_B$ (°K) | Critical temperature, $T_C$ (°K) | Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol) | Unit risk factor, URF ($\mu g/m^3)^{-1}$ | Reference conc., RfC ($mg/m^3$) | Molecular weight, MW (g/mol) | URF extrapolated (X) | RfC extrapolated (X) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56235 | Carbon tetrachloride | 1.74E+02 | 7.80E-02 | 8.80E-06 | 7.93E+02 | 1.24E+00 | 3.03E-02 | 25 | 349.90 | 556.60 | 7,127 | 1.5E-05 | 0.0E+00 | 1.54E+02 | | |
| 57749 | Chlordane | 1.20E+05 | 1.18E-02 | 4.37E-06 | 5.60E-02 | 1.99E-03 | 4.85E-05 | 25 | 624.24 | 885.73 | 14,000 | 1.0E-04 | 7.0E-04 | 4.10E+02 | | |
| 58899 | gamma-HCH (Lindane) | 1.07E+03 | 1.42E-02 | 7.34E-06 | 7.30E+00 | 5.73E-04 | 1.40E-05 | 25 | 596.55 | 839.36 | 15,000 | 3.7E-04 | 1.1E-03 | 2.91E+02 | X | X |
| 60297 | Ethyl ether | 5.73E+00 | 7.82E-02 | 8.61E-06 | 5.68E+04 | 1.35E+00 | 3.29E-02 | 25 | 307.50 | 466.74 | 6,338 | 0.0E+00 | 7.0E-01 | 7.41E+01 | | X |
| 60571 | Dieldrin | 2.14E+04 | 1.25E-02 | 4.74E-06 | 1.95E-01 | 6.18E-04 | 1.51E-05 | 25 | 613.32 | 842.25 | 17,000 | 4.6E-03 | 1.8E-04 | 3.81E+02 | | X |
| 67641 | Acetone | 5.75E-01 | 1.24E-01 | 1.14E-05 | 1.00E+06 | 1.59E-03 | 3.87E-05 | 25 | 329.20 | 508.10 | 6,955 | 0.0E+00 | 3.5E-01 | 5.81E+01 | | X |
| 67663 | **Chloroform** | 3.98E+01 | 1.04E-01 | 1.00E-05 | 7.92E+03 | 1.50E-01 | 3.66E-03 | 25 | 334.32 | 536.40 | 6,988 | 2.3E-05 | **3.0E-01** | 1.19E+02 | | |
| 67721 | Hexachloroethane | 1.78E+03 | 2.50E-03 | 6.80E-06 | 5.00E+01 | 1.59E-01 | 3.88E-03 | 25 | 458.00 | 695.00 | 9,510 | 4.0E-06 | 3.5E-03 | 2.37E+02 | | X |
| 71432 | **Benzene** | 5.89E+01 | 8.80E-02 | 9.80E-06 | 1.79E+03 | 2.27E-01 | 5.54E-03 | 25 | 353.24 | 562.16 | 7,342 | **2.9E-05** | 3.0E-02 | 7.81E+01 | | |
| 71556 | 1,1,1-Trichloroethane | 1.10E+02 | 7.80E-02 | 8.80E-06 | 1.33E+03 | 7.03E-01 | 1.72E-02 | 25 | 347.24 | 545.00 | 7,136 | 0.0E+00 | 2.2E+00 | 1.33E+02 | | |
| 72435 | Methoxychlor | 9.77E+04 | 1.56E-02 | 4.46E-06 | 1.00E-01 | 6.46E-04 | 1.58E-05 | 25 | 651.02 | 848.49 | 16,000 | 0.0E+00 | 1.8E-02 | 3.46E+02 | | X |
| 72559 | DDE | 4.47E+06 | 1.44E-02 | 5.87E-06 | 1.20E-01 | 8.59E-04 | 2.09E-05 | 25 | 636.44 | 860.38 | 15,000 | 9.7E-05 | 0.0E+00 | 3.18E+02 | X | |
| 74839 | Methyl bromide | 1.05E+01 | 7.28E-02 | 1.21E-05 | 1.52E+04 | 2.55E-01 | 6.22E-03 | 25 | 276.71 | 467.00 | 5,714 | 0.0E+00 | 5.0E-03 | 9.49E+01 | | |
| 74873 | Methyl chloride (chloromethane) | 2.12E+00 | 1.26E-01 | 6.50E-06 | 5.33E+03 | 3.61E-01 | 8.80E-03 | 25 | 249.00 | 416.25 | 5,115 | 1.0E-06 | 9.0E-02 | 5.05E+01 | | |
| 74908 | Hydrogen cyanide | 3.80E+00 | 1.93E-01 | 2.10E-05 | 1.00E+06 | 5.44E-03 | 1.33E-04 | 25 | 299.00 | 456.70 | 6,676 | 0.0E+00 | 3.0E-03 | 2.70E+01 | | |
| 74953 | Methylene bromide | 1.26E+01 | 4.30E-02 | 8.44E-06 | 1.19E+04 | 3.52E-02 | 8.59E-04 | 25 | 370.00 | 583.00 | 7,868 | 0.0E+00 | 3.5E-02 | 1.74E+02 | | X |
| 75003 | Chloroethane (ethyl chloride) | 4.40E+00 | 2.71E-01 | 1.15E-05 | 5.68E+03 | 3.61E-01 | 8.80E-03 | 25 | 285.30 | 460.40 | 5,879 | 8.3E-07 | 1.0E+01 | 6.45E+01 | X | |
| 75014 | Vinyl chloride (chloroethene) | 1.86E+01 | 1.06E-01 | 1.23E-05 | 8.80E+03 | 1.10E+00 | 2.69E-02 | 25 | 259.25 | 432.00 | 5,250 | 8.8E-06 | 1.0E-01 | 6.25E+01 | | |
| 75058 | Acetonitrile | 4.20E+00 | 1.28E-01 | 1.66E-05 | 1.00E+06 | 1.42E-03 | 3.45E-05 | 25 | 354.60 | 545.50 | 7,110 | 0.0E+00 | 6.0E-02 | 4.11E+01 | | |
| 75070 | Acetaldehyde | 1.06E+00 | 1.24E-01 | 1.41E-05 | 1.00E+06 | 3.23E-03 | 7.87E-05 | 25 | 293.10 | 466.00 | 6,157 | 2.2E-06 | 9.0E-03 | 4.41E+01 | | |
| 75092 | Methylene chloride | 1.17E+01 | 1.01E-01 | 1.17E-05 | 1.30E+04 | 8.96E-02 | 2.18E-03 | 25 | 313.00 | 510.00 | 6,706 | 4.7E-07 | 3.0E+00 | 8.49E+01 | | |
| 75150 | Carbon disulfide | 4.57E+01 | 1.04E-01 | 1.00E-05 | 1.19E+03 | 1.24E+00 | 3.02E-02 | 25 | 319.00 | 552.00 | 6,391 | 0.0E+00 | 7.0E-01 | 7.61E+01 | | |
| 75218 | Ethylene oxide | 1.33E+00 | 1.04E-01 | 1.45E-05 | 3.04E+05 | 2.27E-02 | 5.54E-04 | 25 | 283.60 | 469.00 | 6,104 | 1.0E-04 | 0.0E+00 | 4.41E+01 | | |
| 75252 | Bromoform | 8.71E+01 | 1.49E-02 | 1.03E-05 | 3.10E+03 | 2.41E-02 | 5.88E-04 | 25 | 422.35 | 696.00 | 9,479 | 1.1E-06 | 7.0E-02 | 2.53E+02 | | X |
| 75274 | Bromodichloromethane | 5.50E+01 | 2.98E-02 | 1.06E-05 | 6.74E+03 | 6.54E-02 | 1.60E-03 | 25 | 363.15 | 585.85 | 7,800 | 1.8E-05 | 7.0E-02 | 1.64E+02 | X | X |
| 75296 | 2-Chloropropane | 9.14E+00 | 8.88E-02 | 1.01E-05 | 3.73E+03 | 5.93E-01 | 1.45E-02 | 25 | 308.70 | 485.00 | 6,286 | 0.0E+00 | 1.0E-01 | 7.85E+01 | | |
| 75343 | 1,1-Dichloroethane | 3.16E+01 | 7.42E-02 | 1.05E-05 | 5.06E+03 | 2.30E-01 | 5.61E-03 | 25 | 330.55 | 523.00 | 6,895 | 0.0E+00 | 5.0E-01 | 9.90E+01 | | |
| 75354 | 1,1-Dichloroethylene | 5.89E+01 | 9.00E-02 | 1.04E-05 | 2.25E+03 | 1.07E+00 | 2.60E-02 | 25 | 304.75 | 576.05 | 6,247 | 0.0E+00 | 2.0E-01 | 9.69E+01 | | |
| 75456 | Chlorodifluoromethane | 4.79E+01 | 1.01E-01 | 1.28E-05 | 2.00E+00 | 1.10E+00 | 2.70E-02 | 25 | 232.40 | 369.30 | 4,836 | 0.0E+00 | 5.0E+01 | 8.65E+01 | | |
| 75694 | Trichlorofluoromethane | 4.97E+02 | 8.70E-02 | 9.70E-06 | 1.10E+03 | 3.97E+00 | 9.68E-02 | 25 | 296.70 | 471.00 | 5,999 | 0.0E+00 | 7.0E-01 | 1.37E+02 | | |
| 75718 | Dichlorodifluoromethane | 4.57E+02 | 6.65E-02 | 9.92E-06 | 2.80E+02 | 1.40E+01 | 3.42E-01 | 25 | 243.20 | 384.95 | 9,421 | 0.0E+00 | 2.0E-01 | 1.21E+02 | | |
| 76131 | 1,1,2-Trichloro-1,2,2-trifluoroethane | 1.11E+04 | 7.80E-02 | 8.20E-06 | 1.70E+02 | 1.97E+01 | 4.80E-01 | 25 | 320.70 | 487.30 | 6,463 | 0.0E+00 | 3.0E+01 | 1.87E+02 | | |
| 76448 | Heptachlor | 1.41E+06 | 1.12E-02 | 5.69E-06 | 1.80E-01 | 6.05E+01 | 1.48E+00 | 25 | 603.69 | 846.31 | 13,000 | 1.3E-03 | 1.8E-03 | 3.73E+02 | | X |
| 77474 | Hexachlorocyclopentadiene | 2.00E+05 | 1.61E-02 | 7.21E-06 | 1.80E+00 | 1.10E+00 | 2.69E-02 | 25 | 512.15 | 746.00 | 10,931 | 0.0E+00 | 2.0E-04 | 2.73E+02 | | |
| 78831 | Isobutanol | 2.59E+00 | 8.60E-02 | 9.30E-06 | 8.50E+04 | 4.83E-04 | 1.18E-05 | 25 | 381.04 | 547.78 | 10,936 | 0.0E+00 | 1.1E+00 | 7.41E+01 | | X |
| 78875 | 1,2-Dichloropropane | 4.37E+01 | 7.82E-02 | 8.73E-06 | 2.80E+03 | 1.15E-01 | 2.79E-03 | 25 | 369.52 | 572.00 | 7,590 | 1.9E-05 | 4.0E-03 | 1.13E+02 | X | |
| 78933 | Methylethylketone (2-butanone) | 2.30E+00 | 8.08E-02 | 9.80E-06 | 2.23E+05 | 2.29E-03 | 5.58E-05 | 25 | 352.50 | 536.78 | 7,481 | 0.0E+00 | 5.0E+00 | 7.21E+01 | | |

Chemical Properties Lookup Table

| CAS No. | Chemical | Organic carbon partition coefficient, $K_{oc}$ ($cm^3/g$) | Diffusivity in air, $D_a$ ($cm^2/s$) | Diffusivity in water, $D_w$ ($cm^2/s$) | Pure component water solubility, S (mg/L) | Henry's law constant H' (unitless) | Henry's law constant at reference temperature, H (atm-$m^3$/mol) | Henry's law constant reference temperature, $T_R$ (°C) | Normal boiling point, $T_B$ (°K) | Critical temperature, $T_C$ (°K) | Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol) | Unit risk factor, URF ($\mu g/m^3)^{-1}$ | Reference conc., RfC ($mg/m^3$) | Molecular weight, MW (g/mol) | URF extrapolated (X) | RfC extrapolated (X) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 79005 | 1,1,2-Trichloroethane | 5.01E+01 | 7.80E-02 | 8.80E-06 | 4.42E+03 | 3.73E-02 | 9.11E-04 | 25 | 386.15 | 602.00 | 8,322 | 1.6E-05 | 1.4E-02 | 1.33E+02 | | X |
| 79016 | **Trichloroethylene** | 1.66E+02 | 7.90E-02 | 9.10E-06 | 1.47E+03 | 4.21E-01 | 1.03E-02 | 25 | 360.36 | 544.20 | 7,505 | **2.0E-06** | **6.0E-01** | 1.31E+02 | X | |
| 79209 | Methyl acetate | 3.26E+00 | 1.04E-01 | 1.00E-05 | 2.00E+03 | 4.84E-03 | 1.18E-04 | 25 | 329.80 | 506.70 | 7,260 | 0.0E+00 | 3.5E+00 | 7.41E+01 | | X |
| 79345 | 1,1,2,2-Tetrachloroethane | 9.33E+01 | 7.10E-02 | 7.90E-06 | 2.96E+03 | 1.41E-02 | 3.44E-04 | 25 | 419.60 | 661.15 | 8,996 | 5.8E-05 | 2.1E-01 | 1.68E+02 | | X |
| 79469 | 2-Nitropropane | 1.17E+01 | 9.23E-02 | 1.01E-05 | 1.70E+04 | 5.03E-03 | 1.23E-04 | 25 | 393.20 | 594.00 | 8,383 | 2.7E-03 | 2.0E-02 | 8.91E+01 | | |
| 80626 | Methylmethacrylate | 6.98E+00 | 7.70E-02 | 8.60E-06 | 1.50E+04 | 1.38E-02 | 3.36E-04 | 25 | 373.50 | 567.00 | 8,975 | 0.0E+00 | 7.0E-01 | 1.00E+02 | | |
| 83329 | Acenaphthene | 7.08E+03 | 4.21E-02 | 7.69E-06 | 3.57E+00 | 6.34E-03 | 1.55E-04 | 25 | 550.54 | 803.15 | 12,155 | 0.0E+00 | 2.1E-01 | 1.54E+02 | | X |
| 86737 | Fluorene | 1.38E+04 | 3.63E-02 | 7.88E-06 | 1.98E+00 | 2.60E-03 | 6.34E-05 | 25 | 570.44 | 870.00 | 12,666 | 0.0E+00 | 1.4E-01 | 1.66E+02 | | X |
| 87683 | Hexachloro-1,3-butadiene | 5.37E+04 | 5.61E-02 | 6.16E-06 | 3.20E+00 | 3.33E-01 | 8.13E-03 | 25 | 486.15 | 738.00 | 10,206 | 2.2E-05 | 7.0E-04 | 2.61E+02 | | X |
| 88722 | o-Nitrotoluene | 3.24E+02 | 5.87E-02 | 8.67E-06 | 6.50E+02 | 5.11E-04 | 1.25E-05 | 25 | 495.00 | 720.00 | 12,239 | 0.0E+00 | 3.5E-02 | 1.37E+02 | | X |
| 91203 | Naphthalene | 2.00E+03 | 5.90E-02 | 7.50E-06 | 3.10E+01 | 1.98E-02 | 4.82E-04 | 25 | 491.14 | 748.40 | 10,373 | 0.0E+00 | 3.0E-03 | 1.28E+02 | | |
| 91576 | 2-Methylnaphthalene | 2.81E+03 | 5.22E-02 | 7.75E-06 | 2.46E+01 | 2.12E-02 | 5.17E-04 | 25 | 514.26 | 761.00 | 12,600 | 0.0E+00 | 7.0E-02 | 1.42E+02 | | X |
| 92524 | Biphenyl | 4.38E+03 | 4.04E-02 | 8.15E-06 | 7.45E+00 | 1.23E-02 | 2.99E-04 | 25 | 529.10 | 789.00 | 10,890 | 0.0E+00 | 1.8E-01 | 1.54E+02 | | X |
| 95476 | o-Xylene | 3.63E+02 | 8.70E-02 | 1.00E-05 | 1.78E+02 | 2.12E-01 | 5.18E-03 | 25 | 417.60 | 630.30 | 8,661 | 0.0E+00 | 1.0E-01 | 1.06E+02 | | |
| 95501 | 1,2-Dichlorobenzene | 6.17E+02 | 6.90E-02 | 7.90E-06 | 1.56E+02 | 7.77E-02 | 1.90E-03 | 25 | 453.57 | 705.00 | 9,700 | 0.0E+00 | 2.0E-01 | 1.47E+02 | | |
| 95578 | 2-Chlorophenol | 3.88E+02 | 5.01E-02 | 9.46E-06 | 2.20E+04 | 1.60E-02 | 3.90E-04 | 25 | 447.53 | 675.00 | 9,572 | 0.0E+00 | 1.8E-02 | 1.29E+02 | | X |
| 95636 | 1,2,4-Trimethylbenzene | 1.35E+03 | 6.06E-02 | 7.92E-06 | 5.70E+01 | 2.52E-01 | 6.14E-03 | 25 | 442.30 | 649.17 | 9,369 | 0.0E+00 | 6.0E-03 | 1.20E+02 | | |
| 96184 | 1,2,3-Trichloropropane | 2.20E+01 | 7.10E-02 | 7.90E-06 | 1.75E+03 | 1.67E-02 | 4.08E-04 | 25 | 430.00 | 652.00 | 9,171 | 5.7E-04 | 4.9E-03 | 1.47E+02 | X | |
| 96333 | Methyl acrylate | 4.53E+00 | 9.76E-02 | 1.02E-05 | 6.00E+04 | 7.68E-03 | 1.87E-04 | 25 | 353.70 | 536.00 | 7,749 | 0.0E+00 | 1.1E-01 | 8.61E+01 | | X |
| 97632 | Ethylmethacrylate | 2.95E+01 | 6.53E-02 | 8.37E-06 | 3.67E+03 | 3.44E-02 | 8.40E-04 | 25 | 390.00 | 571.00 | 10,957 | 0.0E+00 | 3.2E-01 | 1.14E+02 | | X |
| 98066 | tert-Butylbenzene | 7.71E+02 | 5.65E-02 | 8.02E-06 | 2.95E+01 | 4.87E-01 | 1.19E-02 | 25 | 442.10 | 1220.00 | 8,980 | 0.0E+00 | 1.4E-01 | 1.34E+02 | | X |
| 98828 | Cumene | 4.89E+02 | 6.50E-02 | 7.10E-06 | 6.13E+01 | 4.74E+01 | 1.46E-02 | 25 | 425.56 | 631.10 | 10,335 | 0.0E+00 | 4.0E-01 | 1.20E+02 | | |
| 98862 | Acetophenone | 5.77E+01 | 6.00E-02 | 8.73E-06 | 6.13E+03 | 4.38E-04 | 1.07E-05 | 25 | 475.00 | 709.50 | 11,732 | 0.0E+00 | 3.5E-01 | 1.20E+02 | | X |
| 98953 | Nitrobenzene | 6.46E+01 | 7.60E-02 | 8.60E-06 | 2.09E+03 | 9.82E-04 | 2.39E-05 | 25 | 483.95 | 719.00 | 10,566 | 0.0E+00 | 2.0E-03 | 1.23E+02 | | |
| 100414 | **Ethylbenzene** | 3.63E+02 | 7.50E-02 | 7.80E-06 | 1.69E+02 | 3.22E-01 | 7.86E-03 | 25 | 409.34 | 617.20 | 8,501 | **2.5E-06** | 1.0E+00 | 1.06E+02 | | |
| 100425 | Styrene | 7.76E+02 | 7.10E-02 | 8.00E-06 | 3.10E+02 | 1.12E-01 | 2.74E-03 | 25 | 418.31 | 636.00 | 8,737 | 0.0E+00 | 1.0E+00 | 1.04E+02 | | |
| 100447 | Benzylchloride | 6.14E+01 | 7.50E-02 | 7.80E-06 | 5.25E+02 | 1.70E-02 | 4.14E-04 | 25 | 452.00 | 685.00 | 8,773 | 4.9E-05 | 0.0E+00 | 1.27E+02 | X | |
| 100527 | Benzaldehyde | 4.59E+01 | 7.21E-02 | 9.07E-06 | 3.30E+03 | 9.73E-04 | 2.37E-05 | 25 | 452.00 | 695.00 | 11,658 | 0.0E+00 | 3.5E-01 | 1.06E+02 | | X |
| 103651 | n-Propylbenzene | 5.62E+02 | 6.01E-02 | 7.83E-06 | 6.00E+01 | 4.37E-01 | 1.07E-02 | 25 | 432.20 | 630.00 | 9,123 | 0.0E+00 | 1.4E-01 | 1.20E+02 | | X |
| 104518 | n-Butylbenzene | 1.11E+03 | 5.70E-02 | 8.12E-06 | 2.00E+00 | 5.38E-01 | 1.31E-02 | 25 | 456.46 | 660.50 | 9,290 | 0.0E+00 | 1.4E-01 | 1.34E+02 | | X |
| 106423 | p-Xylene | 3.89E+02 | 7.69E-02 | 8.44E-06 | 1.85E+02 | 3.13E-01 | 7.64E-03 | 25 | 411.52 | 616.20 | 8,525 | 0.0E+00 | 1.0E-01 | 1.06E+02 | | |
| 106467 | 1,4-Dichlorobenzene | 6.17E+02 | 6.90E-02 | 7.90E-06 | 7.90E+01 | 9.82E-02 | 2.39E-03 | 25 | 447.21 | 684.75 | 9,271 | 0.0E+00 | 8.0E-01 | 1.47E+02 | | |
| 106934 | 1,2-Dibromoethane (ethylene dibror | 2.50E+01 | 2.17E-02 | 1.19E-05 | 4.18E+03 | 3.04E-02 | 7.41E-04 | 25 | 404.60 | 583.00 | 8,310 | 2.2E-04 | 2.0E-04 | 1.88E+02 | | |
| 106990 | 1,3-Butadiene | 1.91E+01 | 2.49E-01 | 1.08E-05 | 7.35E+02 | 3.01E+00 | 7.34E-02 | 25 | 268.60 | 425.00 | 5,370 | 3.0E-02 | 2.0E-03 | 5.41E+01 | | |
| 107028 | Acrolein | 2.76E+00 | 1.05E-01 | 1.22E-05 | 2.13E+05 | 4.99E-03 | 1.22E-04 | 25 | 325.60 | 506.00 | 6,731 | 0.0E+00 | 2.0E-05 | 5.61E+01 | | |
| 107062 | 1,2-Dichloroethane | 1.74E+01 | 1.04E-01 | 9.90E-06 | 8.52E+03 | 4.00E-02 | 9.77E-04 | 25 | 356.65 | 561.00 | 7,643 | 2.6E-05 | 0.0E+00 | 9.90E+01 | | |
| 107131 | Acrylonitrile | 5.90E+00 | 1.22E-01 | 1.34E-05 | 7.40E+04 | 4.21E-03 | 1.03E-04 | 25 | 350.30 | 519.00 | 7,786 | 6.8E-05 | 2.0E-03 | 5.31E+01 | | |
| 108054 | Vinyl acetate | 5.25E+00 | 8.50E-02 | 9.20E-06 | 2.00E+04 | 2.09E-02 | 5.10E-04 | 25 | 345.65 | 519.13 | 7,800 | 0.0E+00 | 2.0E-01 | 8.61E+01 | | |
| 108101 | Methylisobutylketone (4-methyl-2-pe | 9.06E+00 | 7.50E-02 | 7.80E-06 | 1.90E+04 | 5.64E-03 | 1.38E-04 | 25 | 389.50 | 571.00 | 8,243 | 0.0E+00 | 3.0E+00 | 1.00E+02 | | |
| 108383 | m-Xylene | 4.07E+02 | 7.00E-02 | 7.80E-06 | 1.61E+02 | 3.00E-01 | 7.32E-03 | 25 | 412.27 | 617.05 | 8,523 | 0.0E+00 | 1.0E-01 | 1.06E+02 | | |
| 108678 | 1,3,5-Trimethylbenzene | 1.35E+03 | 6.02E-02 | 8.67E-06 | 2.00E+00 | 2.41E-01 | 5.87E-03 | 25 | 437.89 | 637.25 | 9,321 | 0.0E+00 | 6.0E-03 | 1.20E+02 | | |
| 108872 | Methylcyclohexane | 7.85E+01 | 7.35E-02 | 8.52E-06 | 1.40E+01 | 4.22E+00 | 1.03E-01 | 25 | 373.90 | 572.20 | 7,474 | 0.0E+00 | 3.0E+00 | 9.82E+01 | | |
| 108883 | **Toluene** | 1.82E+02 | 8.70E-02 | 8.60E-06 | 5.26E+02 | 2.72E-01 | 6.62E-03 | 25 | 383.78 | 591.79 | 7,930 | 0.0E+00 | **3.0E-01** | 9.21E+01 | | |
| 108907 | Chlorobenzene | 2.19E+02 | 7.30E-02 | 8.70E-06 | 4.72E+02 | 1.51E-01 | 3.69E-03 | 25 | 404.87 | 632.40 | 8,410 | 0.0E+00 | 6.0E-02 | 1.13E+02 | | |
| 109693 | 1-Chlorobutane | 1.72E+01 | 8.26E-02 | 1.00E-05 | 1.10E+03 | 6.93E-01 | 1.69E-02 | 25 | 351.60 | 542.00 | 7,263 | 0.0E+00 | 1.4E+00 | 9.26E+01 | | X |
| 110009 | Furan | 1.86E+01 | 1.04E-01 | 1.22E-05 | 1.00E+04 | 2.21E-01 | 5.39E-03 | 25 | 304.60 | 490.20 | 6,477 | 0.0E+00 | 3.5E-03 | 6.81E+01 | | X |
| 110543 | Hexane | 4.34E+01 | 2.00E-01 | 7.77E-06 | 1.24E+01 | 6.82E+01 | 1.66E+00 | 25 | 341.70 | 508.00 | 6,895 | 0.0E+00 | 2.0E-01 | 8.62E+01 | | |
| 111444 | Bis(2-chloroethyl)ether | 1.55E+01 | 6.92E-02 | 7.53E-06 | 1.72E+04 | 7.36E-04 | 1.80E-05 | 25 | 451.15 | 659.79 | 10,803 | 3.3E-04 | 0.0E+00 | 1.43E+02 | | |
| 115297 | Endosulfan | 2.14E+03 | 1.15E-02 | 4.55E-06 | 5.10E-01 | 4.58E-04 | 1.12E-05 | 25 | 674.43 | 942.94 | 14,000 | 0.0E+00 | 2.1E-02 | 4.07E+02 | | X |
| 118741 | Hexachlorobenzene | 5.50E+04 | 5.42E-02 | 5.91E-06 | 5.00E-03 | 5.40E-02 | 1.32E-03 | 25 | 582.55 | 825.00 | 14,447 | 4.6E-04 | 2.8E-03 | 2.85E+02 | | X |
| 120821 | 1,2,4-Trichlorobenzene | 1.78E+03 | 3.00E-02 | 8.23E-06 | 4.88E+01 | 5.81E-02 | 1.42E-03 | 25 | 486.15 | 725.00 | 10,471 | 0.0E+00 | 4.0E-03 | 1.81E+02 | | |
| 123739 | Crotonaldehyde (2-butenai) | 4.82E+00 | 9.56E-02 | 1.07E-05 | 3.69E+04 | 7.99E-04 | 1.95E-05 | 25 | 375.20 | 568.00 | 9 | 5.4E-04 | 0.0E+00 | 7.01E+01 | X | |
| 124481 | Chlorodibromomethane | 6.31E+01 | 1.96E-02 | 1.05E-05 | 2.60E+03 | 3.20E-02 | 7.81E-04 | 25 | 416.14 | 678.20 | 5,900 | 2.4E-05 | 7.0E-02 | 2.08E+02 | X | X |
| 126987 | Methacrylonitrile | 3.58E+01 | 1.12E-01 | 1.32E-05 | 2.54E+04 | 1.01E-02 | 2.46E-04 | 25 | 363.30 | 554.00 | 7,600 | 0.0E+00 | 7.0E-04 | 6.71E+01 | | |
| 126998 | 2-Chloro-1,3-butadiene (chloroprene | 6.73E+01 | 8.58E-02 | 1.03E-05 | 2.12E+03 | 4.91E-01 | 1.20E-02 | 25 | 332.40 | 525.00 | 8,075 | 0.0E+00 | 7.0E-03 | 8.85E+01 | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 127184 | **Tetrachloroethylene** | 1.55E+02 | 7.20E-02 | 8.20E-06 | 2.00E+02 | 7.53E-01 | 1.84E-02 | 25 | 394.40 | 620.20 | 8,288 | 5.9E-06 | **3.5E-02** | 1.66E+02 | | |
| 129000 | Pyrene | 1.05E+05 | 2.72E-02 | 7.24E-06 | 1.35E+00 | 4.50E-04 | 1.10E-05 | 25 | 667.95 | 936 | 14370 | 0.0E+00 | 1.1E-01 | 2.02E+02 | | X |
| 132649 | Dibenzofuran | 5.15E+03 | 2.38E-02 | 6.00E-06 | 3.10E+00 | 5.15E-04 | 1.26E-05 | 25 | 560 | 824 | 66400 | 0.0E+00 | 1.4E-02 | 1.68E+02 | | X |
| 135988 | sec-Butylbenzene | 9.66E+02 | 5.70E-02 | 8.12E-06 | 3.94E+00 | 5.68E-01 | 1.39E-02 | 25 | 446.5 | 679 | 88730 | 0.0E+00 | 1.4E-01 | 1.34E+02 | | X |
| 141786 | Ethylacetate | 6.44E+00 | 7.32E-02 | 9.70E-06 | 8.03E+04 | 5.64E-03 | 1.38E-04 | 25 | 350.26 | 523.3 | 7633.66 | 0.0E+00 | 3.2E+00 | 8.81E+01 | | X |
| 156592 | cis-1,2-Dichloroethylene | 3.55E+01 | 7.36E-02 | 1.13E-05 | 3.50E+03 | 1.67E-01 | 4.07E-03 | 25 | 333.65 | 544 | 7192 | 0.0E+00 | 3.5E-02 | 9.69E+01 | | X |
| 156605 | trans-1,2-Dichloroethylene | 5.25E+01 | 7.07E-02 | 1.19E-05 | 6.30E+03 | 3.84E-01 | 9.36E-03 | 25 | 320.85 | 516.5 | 6717 | 0.0E+00 | 7.0E-02 | 9.69E+01 | | X |
| 205992 | Benzo(b)fluoranthene | 1.23E+06 | 2.26E-02 | 5.56E-06 | 1.50E-03 | 4.54E-03 | 1.11E-04 | 25 | 715.9 | 969.27 | 17000 | 2.1E-04 | 0.0E+00 | 2.52E+02 | X | |
| 218019 | Chrysene | 3.98E+05 | 2.48E-02 | 6.21E-06 | 6.30E-03 | 3.87E-03 | 9.44E-05 | 25 | 714.15 | 979 | 16455 | 2.1E-06 | 0.0E+00 | 2.28E+02 | X | |
| 309002 | Aldrin | 2.45E+06 | 1.32E-02 | 4.86E-06 | 1.70E-02 | 6.95E-03 | 1.70E-04 | 25 | 603.01 | 839.37 | 15000 | 4.9E-03 | 1.1E-04 | 3.65E+02 | | X |
| 319846 | alpha-HCH (alpha-BHC) | 1.23E+03 | 1.42E-02 | 7.34E-06 | 2.00E+00 | 4.34E-04 | 1.06E-05 | 25 | 596.55 | 839.36 | 15000 | 1.8E-03 | 0.0E+00 | 2.91E+02 | | |
| 541731 | 1,3-Dichlorobenzene | 1.98E+03 | 6.92E-02 | 7.86E-06 | 1.34E+02 | 1.27E-01 | 3.09E-03 | 25 | 446 | 684 | 9230.18 | 0.0E+00 | 1.1E-01 | 1.47E+02 | | X |
| 542756 | 1,3-Dichloropropene | 4.57E+01 | 6.26E-02 | 1.00E-05 | 2.80E+03 | 7.24E-01 | 1.77E-02 | 25 | 381.15 | 587.38 | 7900 | 4.0E-06 | 2.0E-02 | 1.11E+02 | | |
| 630206 | 1,1,1,2-Tetrachloroethane | 1.16E+02 | 7.10E-02 | 7.90E-06 | 1.10E+03 | 9.90E-02 | 2.41E-03 | 25 | 403.5 | 624 | 9768.282525 | 7.4E-06 | 1.1E-01 | 1.68E+02 | | X |
| 1634044 | MTBE | 7.26E+00 | 1.02E-01 | 1.05E-05 | 5.10E+04 | 2.56E-02 | 6.23E-04 | 25 | 328.3 | 497.1 | 6677.66 | 0.0E+00 | 3.0E+00 | 8.82E+01 | | |
| 7439976 | Mercury (elemental) | 5.20E+01 | 3.07E-02 | 6.30E-06 | 2.00E+01 | 4.40E-01 | 1.07E-02 | 25 | 629.88 | 1750 | 14127 | 0.0E+00 | 3.0E-04 | 2.01E+02 | | |

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, 1,3,5-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 2.80E+01 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 4.0E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, Benzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 2.68E+01 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 4.1E-08 | 1.1E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 7.81E+01 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.1E-07 | 3.8E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 4.16E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 4.7E-09 | 4.4E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 1.52E+02 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.5E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 4.16E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 5.1E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 1.52E+02 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.7E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 2.58E+01 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 6.7E-09 | 7.5E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 12.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 1.51E+02 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.61 | 0.382 | 0.244 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 12.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 6.2E-05 |

MESSAGE SUMMARY BELOW:

**END**

**SGRA-1, 21.5 ft bgs**

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

Reset to Defaults

**SGRA-1, 21.5 ft, 1,2,4-Trimethylbenzene**

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 2.41E+01 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 4.3E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 21.5 ft, 1,3,5-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 2.31E+01 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 4.1E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 21.5 ft, Benzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 2.71E+01 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 5.1E-09 | 1.4E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 21.5 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 2.63E+01 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 4.7E-09 | 1.6E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 21.5 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 2.34E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 3.2E-10 | 3.0E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 21.5 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 4.77E+01 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 5.7E-06 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 21.5 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 2.91E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 4.4E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 21.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 4.77E+01 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 6.3E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 21.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 3.59E+01 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.1E-09 | 1.2E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 21.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 7.91E+01 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 655 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.63 | 0.379 | 0.294 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 21.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.9E-06 |

MESSAGE SUMMARY BELOW:

END

SGRA-1, 31.5 ft bgs

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon113)
- Benzene
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, 1,2,4-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 3.83E+01 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 9.2E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, 1,3,5-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 1.92E+01 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 4.6E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon113)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 76131 | 6.36E+01 | | | 1,1,2-Trichloro-1,2,2-trifluoroethane |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon113)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.8E-08 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, Benzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 2.20E+01 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 5.6E-09 | 1.5E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 3.30E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 6.2E-10 | 5.8E-07 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 1.22E+02 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.0E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 2.95E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 6.0E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 1.22E+02 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.2E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 3.25E+02 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.4E-08 | 1.6E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, Trichloroethylene (TCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 79016 | 1.50E+02 | | | Trichloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, Trichloroethylene (TCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 2.4E-09 | 4.6E-06 |

MESSAGE SUMMARY BELOW:

MESSAGE: Risk/HQ or risk-based soil concentration is based on a route-to-route extrapolation.

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-1, 31.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 1.13E+02 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ ($^oC$) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 960 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.67 | 0.383 | 0.277 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-1, 31.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 7.6E-06 |

MESSAGE SUMMARY BELOW:

END

SGRA-2, 7 ft bgs

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, 1,2,4-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 2.01E+01 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.2E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, 1,3,5-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 8.30E+00 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 9.1E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, Benzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 4.10E+00 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 4.8E-09 | 1.3E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 1.76E+02 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.9E-07 | 6.6E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 1.00E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 8.6E-10 | 8.1E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 3.60E+01 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.7E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 1.21E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.1E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 3.60E+01 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.0E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 2.98E+01 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 5.8E-09 | 6.6E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 7 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 2.33E+01 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 213 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.62 | 0.381 | 0.276 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 7 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 7.3E-06 |

MESSAGE SUMMARY BELOW:

**END**

SGRA-2, 12.5 ft bgs

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, 1,2,4-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 4.17E+01 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.1E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, 1,3,5-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 1.87E+01 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 9.5E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, Benzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 8.30E+00 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 4.5E-09 | 1.2E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 1.17E+02 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 6.0E-08 | 2.0E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 2.39E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 9.6E-10 | 8.9E-07 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 9.11E+01 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.2E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 2.82E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.2E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 9.11E+01 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.5E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 2.98E+01 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 2.7E-09 | 3.0E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 12.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 6.78E+01 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 381 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.54 | 0.408 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 12.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 9.8E-06 |

MESSAGE SUMMARY BELOW:

END

SGRA-2, 28.5 ft bgs

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5, 1,2,4-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 1.52E+01 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.2E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5 ft, 1,3,5-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 7.40E+00 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ ($^oC$) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.6E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5 ft, Benzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 4.10E+00 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 9.0E-11 | 2.4E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 5.85E+01 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.3E-09 | 4.4E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 1.39E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 2.1E-11 | 1.9E-08 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 5.21E+01 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 6.9E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 1.52E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.7E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 5.21E+01 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 7.5E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 3.39E+01 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.0E-10 | 1.2E-06 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-2, 28.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 2.41E+01 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.82 | 0.312 | 0.272 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-2, 28.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.3E-07 |

MESSAGE SUMMARY BELOW:

**END**

SGRA-3, 11.5 ft bgs

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, 1,2,4-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 1.92E+01 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.7E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, 1,3,5-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 9.30E+00 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.8E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, Benzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 1.66E+01 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 3.4E-09 | 9.2E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 1.22E+02 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 2.4E-08 | 8.1E-06 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 3.21E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 4.8E-10 | 4.4E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, m-Xylene**

Reset to Defaults

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| | Soil Gas Concentration Data | | | |
| 108383 | 1.13E+02 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.5E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 2.82E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 4.7E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 1.13E+02 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.6E-05 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 2.37E+01 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 7.7E-10 | 8.7E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 11.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 1.24E+02 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 351 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.57 | 0.397 | 0.324 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 11.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 6.7E-06 |

MESSAGE SUMMARY BELOW:

END

SGRA-3, 18.5 ft bgs

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, 1,2,4-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 1.33E+02 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.1E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, 1,3,5-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 6.88E+01 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 5.5E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, Benzene**

Reset to Defaults

| ENTER Chemical CAS No. (numbers only, no dashes) | Soil Gas Concentration Data: ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 1.98E+01 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.7E-09 | 4.5E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 5.37E+01 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 4.4E-09 | 1.5E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 5.21E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 3.1E-10 | 2.9E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 1.69E+02 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ ($^oC$) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 8.9E-06 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 8.24E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 5.6E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 1.69E+02 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 9.7E-06 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 1.29E+01 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.7E-10 | 1.9E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 18.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 9.41E+01 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 564 | 22 | SICL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SICL | 1.66 | 0.368 | 0.307 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 18.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.0E-06 |

MESSAGE SUMMARY BELOW:

END

SGRA-3, 28.5 ft bgs

- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 28.5 ft, Benzene**

Reset to Defaults

| ENTER Chemical CAS No. (numbers only, no dashes) | Soil Gas Concentration Data: ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 2.84E+01 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.8 | 0.324 | 0.25 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 28.5 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 3.5E-09 | 9.3E-06 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 28.5 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 2.00E+01 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.8 | 0.324 | 0.25 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 28.5 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 2.3E-09 | 7.8E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 28.5 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 2.82E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.8 | 0.324 | 0.25 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 28.5 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 2.5E-10 | 2.3E-07 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 28.5 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 9.54E+01 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.8 | 0.324 | 0.25 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 28.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 7.4E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 28.5 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 2.56E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.8 | 0.324 | 0.25 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 28.5 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.5E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 28.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 9.54E+01 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.8 | 0.324 | 0.25 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 28.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 8.1E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 28.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 5.08E+01 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.8 | 0.324 | 0.25 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 28.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.0E-09 | 1.1E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-3, 28.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 1.43E+02 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 869 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.8 | 0.324 | 0.25 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-3, 28.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 4.6E-06 |

MESSAGE SUMMARY BELOW:

**END**

SGRA-4, 10.5 ft bgs

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- Trichlorofluoromethane (Freon11)
- 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon113)
- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, 1,2,4-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 1.33E+01 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.6E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, 1,3,5-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 6.90E+00 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.9E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, Trichlorofluoromethane (Freon 11)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 75694 | 6.70E+00 | | | Trichlorofluoromethane |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, Trichlorofluoromethane (Freon 11)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.1E-07 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**

Reset to Defaults

| ENTER Chemical CAS No. (numbers only, no dashes) | Soil Gas Concentration Data: ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 76131 | 4.67E+01 | | | 1,1,2-Trichloro-1,2,2-trifluoroethane |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.0E-08 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, Benzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 4.80E+00 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.4E-09 | 3.7E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 1.27E+01 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 3.5E-09 | 1.2E-06 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 1.21E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 2.5E-10 | 2.3E-07 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 4.25E+01 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 7.7E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 1.26E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.9E-06 |

MESSAGE SUMMARY BELOW:

END

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 4.25E+01 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 8.5E-06 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 1.22E+02 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 5.6E-09 | 6.4E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, Trichloroethylene (TCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 79016 | 1.23E+01 | | | Trichloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, Trichloroethylene (TCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 2.1E-10 | 4.2E-07 |

MESSAGE SUMMARY BELOW:

MESSAGE: Risk/HQ or risk-based soil concentration is based on a route-to-route extrapolation.

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 10.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 3.39E+01 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 320 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.63 | 0.381 | 0.304 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 10.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.5E-06 |

MESSAGE SUMMARY BELOW:

END

SGRA-4, 18 ft bgs

- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon113)
- Benzene
- Chloroform
- Ethylbenzene
- m-Xylene
- o-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, 1,2,4-Trimethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95636 | 3.09E+01 | | | 1,2,4-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, 1,2,4-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.5E-03 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

Reset to Defaults

**SGRA-4, 18 ft, 1,3,5-Trimethylbenzene**

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108678 | 2.01E+01 | | | 1,3,5-Trimethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, 1,3,5-Trimethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 9.6E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 76131 | 1.07E+02 | | | 1,1,2-Trichloro-1,2,2-trifluoroethane |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.3E-06 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, Benzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 71432 | 2.43E+01 | | | Benzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, Benzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.2E-07 | 3.3E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, Chloroform**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 67663 | 3.12E+01 | | | Chloroform |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, Chloroform**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.4E-07 | 4.9E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, Ethylbenzene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 100414 | 3.51E+01 | | | Ethylbenzene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, Ethylbenzene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.3E-08 | 1.2E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 1.13E+02 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 3.7E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, o-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 95476 | 3.64E+01 | | | o-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, o-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.4E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 1.13E+02 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 4.0E-04 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 6.17E+01 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 5.2E-08 | 5.9E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 18 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 1.39E+02 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 549 | 22 | SIL | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| SIL | 1.65 | 0.373 | 0.152 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 18 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 1.8E-04 |

MESSAGE SUMMARY BELOW:

**END**

SGRA-4, 30.5 ft bgs

- 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon113)
- m-Xylene
- p-Xylene
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)
- Toluene

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 30.5 ft, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 76131 | 3.60E+02 | | | 1,1,2-Trichloro-1,2,2-trifluoroethane |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 930 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.56 | 0.424 | 0.279 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 30.5 ft, 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 5.1E-07 |

MESSAGE SUMMARY BELOW:

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 30.5 ft, m-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108383 | 1.61E+02 | | | m-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 930 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.56 | 0.424 | 0.279 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 30.5 ft, m-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 6.2E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 30.5 ft, p-Xylene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 106423 | 1.61E+02 | | | p-Xylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 930 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.56 | 0.424 | 0.279 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 30.5 ft, p-Xylene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 6.8E-05 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 30.5 ft, Tetrachloroethylene (PCE)**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 127184 | 1.56E+02 | | | Tetrachloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 930 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.56 | 0.424 | 0.279 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 30.5 ft, Tetrachloroethylene (PCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 1.6E-08 | 1.8E-04 |

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 30.5 ft, Trichloroethylene (TCE)**

Reset to Defaults

| ENTER Chemical CAS No. (numbers only, no dashes) | Soil Gas Concentration Data: ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 79016 | 6.44E+01 | | | Trichloroethylene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 930 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.56 | 0.424 | 0.279 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 30.5 ft, Trichloroethylene (TCE)**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| 2.4E-09 | 4.7E-06 |

MESSAGE SUMMARY BELOW:

MESSAGE: Risk/HQ or risk-based soil concentration is based on a route-to-route extrapolation.

**END**

DATA ENTRY SHEET

SG-SCREEN
Version 3.1; 02/04

**SGRA-4, 30.5 ft, Toluene**

Reset to Defaults

Soil Gas Concentration Data

| ENTER Chemical CAS No. (numbers only, no dashes) | ENTER Soil gas conc., $C_g$ ($\mu g/m^3$) | OR | ENTER Soil gas conc., $C_g$ (ppmv) | Chemical |
|---|---|---|---|---|
| 108883 | 1.47E+02 | | | Toluene |

MORE ↓

| ENTER Depth below grade to bottom of enclosed space floor, $L_F$ (15 or 200 cm) | ENTER Soil gas sampling depth below grade, $L_s$ (cm) | ENTER Average soil temperature, $T_S$ (°C) | ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability) | OR | ENTER User-defined vadose zone soil vapor permeability, $k_v$ ($cm^2$) |
|---|---|---|---|---|---|
| 15 | 930 | 22 | L | | |

MORE ↓

| ENTER Vandose zone SCS soil type (Lookup Soil Parameters) | ENTER Vadose zone soil dry bulk density, $\rho_b^A$ ($g/cm^3$) | ENTER Vadose zone soil total porosity, $n^V$ (unitless) | ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ ($cm^3/cm^3$) | ENTER Average vapor flow rate into bldg. (Leave blank to calculate) $Q_{soil}$ (L/m) |
|---|---|---|---|---|
| L | 1.56 | 0.424 | 0.279 | 5 |

MORE ↓

| ENTER Averaging time for carcinogens, $AT_C$ (yrs) | ENTER Averaging time for noncarcinogens, $AT_{NC}$ (yrs) | ENTER Exposure duration, ED (yrs) | ENTER Exposure frequency, EF (days/yr) |
|---|---|---|---|
| 70 | 30 | 30 | 350 |

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

**SGRA-4, 30.5 ft, Toluene**

| Incremental risk from vapor intrusion to indoor air, carcinogen (unitless) | Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless) |
|---|---|
| NA | 2.3E-05 |

MESSAGE SUMMARY BELOW:

**END**