LDEQ RECAP
APPENDIX I
TABLE I17
CANCER SLOPE FACTORS AND REFERENCE DOSES

| COMPOUND | CAS # | $SF_o$ | REF | $SF_i$ | REF | $RfD_o$ | REF | $RfD_i$ | REF | ABS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | $(mg/kg\text{-}day)^{-1}$ | | $(mg/kg\text{-}day)^{-1}$ | | mg/kg-day | | mg/kg-day | | unitless |
| Acenaphthene | 83-32-9 | ******* | | ******* | | 6.00E-02 | I | 6.00E-02 | * | 0 |
| Acenaphthylene | 208-96-8 | ******* | | ******* | | 6.00E-02 | S | 6.00E-02 | * | 0 |
| Anthracene | 120-12-7 | ******* | | ******* | | 3.00E-01 | I | 3.00E-01 | * | 0 |
| Benzene | 71-43-2 | 2.90E-02 | I | 2.90E-02 | I | 4.00E-03 | I | 8.60E-03 | I | 0 |
| Benz(a)anthracene | 56-55-3 | 7.30E-01 | E | 3.10E-01 | E | ******* | | ******* | | 0.13 |
| Benzo(a)pyrene | 50-32-8 | 7.30E+00 | I | 3.10E+00 | E | ******* | | ******* | | 0.13 |
| Benzo(b)fluoranthene | 205-99-2 | 7.30E-01 | E | 3.10E-01 | E | ******* | | ******* | | 0.13 |
| Benzo(k)fluoranthene | 207-08-9 | 7.30E-02 | E | 3.10E-02 | E | ******* | | ******* | | 0.13 |
| Chrysene | 218-01-9 | 7.30E-03 | E | 3.10E-03 | E | ******* | | ******* | | 0.13 |
| Dibenz(a,h)anthracene | 53-70-3 | 7.30E+00 | E | 3.10E+00 | E | ******* | | ******* | | 0.13 |
| Ethyl benzene | 100-41-4 | ******* | | ******* | | 1.00E-01 | I | 2.86E-01 | I | 0 |
| Fluoranthene | 206-44-0 | ******* | | ******* | | 4.00E-02 | I | 4.00E-02 | * | 0.13 |
| Fluorene | 86-73-7 | ******* | | ******* | | 4.00E-02 | I | 4.00E-02 | * | 0 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 7.30E-01 | E | 3.10E-01 | E | ******* | | ******* | | 0.13 |
| Lead (inorganic) | 7439-92-1 | ******* | | ******* | | ******* | | ******* | | IEUBK |
| Methyl ethyl ketone | 78-93-3 | ******* | | ******* | | 6.00E-01 | I | 2.86E-01 | I | 0 |
| Methyl isobutyl ketone | 108-10-1 | ******* | | ******* | | 8.00E-02 | H | 8.60E-01 | I | 0 |
| Methylnaphthalene,2- | 91-57-6 | ******* | | ******* | | 2.00E-02 | S | 8.60E-04 | S | 0 |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | ******* | | ******* | | 8.57E-01 | # | 8.57E-01 | I | 0 |
| Naphthalene | 91-20-3 | ******* | | ******* | | 2.00E-02 | I | 8.60E-04 | I | 0 |
| Phenanthrene | 85-01-8 | ******* | | ******* | | 3.00E-01 | S | 3.00E-01 | * | 0 |
| Pyrene | 129-00-0 | ******* | | ******* | | 3.00E-02 | I | 3.00E-02 | * | 0 |
| Toluene | 108-88-3 | ******* | | ******* | | 2.00E-01 | I | 1.14E-01 | I | 0 |
| Xylene(mixed) | 1330-20-7 | ******* | | ******* | | 2.00E-01 | I | 2.90E-02 | I | 0 |
| Aliphatics C6-C8 | NA | ******* | | ******* | | 5.00E+00 | T | 5.30E+00 | T | 0 |
| Aliphatics >C8-C10 | NA | ******* | | ******* | | 1.00E-01 | T | 2.90E-01 | T | 0 |
| Aliphatics >C10-C12 | NA | ******* | | ******* | | 1.00E-01 | T | 3.00E-01 | T | 0 |
| Aliphatics >C12-C16 | NA | ******* | | ******* | | 1.00E-01 | T | 3.00E-01 | T | 0 |
| Aliphatics >C16-C35 | NA | ******* | | ******* | | 2.00E+00 | T | 2.00E+00 | * | 0.1 |

NOTE: See end of table for designation of letters and symbols.

LDEQ RECAP
APPENDIX I
TABLE I17
CANCER SLOPE FACTORS AND REFERENCE DOSES

| COMPOUND | CAS # | $SF_o$ | REF | $SF_i$ | REF | $RfD_o$ | REF | $RfD_i$ | REF | ABS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | $(mg/kg\text{-}day)^{-1}$ | | $(mg/kg\text{-}day)^{-1}$ | | mg/kg-day | | mg/kg-day | | unitless |
| Aromatics >C8-C10 | NA | ******* | | ******* | | 4.00E-02 | T | 6.00E-02 | T | 0 |
| Aromatics >C10-C12 | NA | ******* | | ******* | | 4.00E-02 | T | 6.00E-02 | T | 0 |
| Aromatics >C12-C16 | NA | ******* | | ******* | | 4.00E-02 | T | 6.00E-02 | T | 0 |
| Aromatics >C16-C21 | NA | ******* | | ******* | | 3.00E-02 | T | 3.00E-02 | * | 0.1 |
| Aromatics >C21-C35 | NA | ******* | | ******* | | 3.00E-02 | T | 3.00E-02 | * | 0.1 |

I = Integrated Risk Information System (IRIS), EPA.
H = Health Effects Assessment Summary Tables (HEAST), EPA.
A = Health Effects Assessment Summary Tables Alternative, EPA Region III Risk-Based Concentration Table.
E = EPA-NCEA Regional Support provisional value, EPA Region III Risk-Based Concentration Table.
* = Inhalation toxicity not available, oral toxicity value used to assess inhalation exposure.
# = Oral toxicity value not available, inhalation toxicity value used to assess oral exposure.
O = EPA Region III Risk-Based Concentration Table.
W = Withdrawn from IRIS or HEAST.
T = TPH Criteria Working Group, 1997.
IEUBK = refer to IEUBK model guidelines.
D= Dermal RfD for cadmium is 2.5E-05 mg/kg-d (based on an oral absorption efficiency of 5%; RAGS-E, EPA 1999).

LDEQ RECAP
APPENDIX I
TABLE I18
CHEMICAL AND PHYSICAL PARAMETERS

| COMPOUND | CAS # | MOL. WT | Koc | REF | H | REF | Da | REF | Dw | REF | S | REF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | g/g-mole | cm3/g | | atm-m3/mol | | cm2/s | | cm2/s | | mg/L | |
| Acenaphthene | 83-32-9 | 154.2 | 4.90E+03 | 1 | 1.55E-04 | 1 | 4.21E-02 | 1 | 7.69E-06 | 1 | 4.24E+00 | 1 |
| Acenaphthylene | 208-96-8 | 152.2 | 2.00E+03 | 2 | 1.14E-04 | 2 | 4.39E-02 | 3 | 7.53E-06 | 3 | 1.60E+01 | 2 |
| Anthracene | 120-12-7 | 178.23 | 2.35E+04 | 1 | 6.50E-05 | 1 | 3.24E-02 | 1 | 7.74E-06 | 1 | 4.30E-02 | 1 |
| Benzene | 71-43-2 | 78.11 | 6.17E+01 | 1 | 5.55E-03 | 1 | 8.80E-02 | 1 | 9.80E-06 | 1 | 1.75E+03 | 1 |
| Benz(a)anthracene | 56-55-3 | 228.29 | 3.58E+05 | 1 | 3.35E-06 | 1 | 5.10E-02 | 1 | 9.00E-06 | 1 | 9.40E-03 | 1 |
| Benzo(a)pyrene | 50-32-8 | 252.32 | 9.69E+05 | 1 | 1.13E-06 | 1 | 4.30E-02 | 1 | 9.00E-06 | 1 | 1.60E-03 | 1 |
| Benzo(b)fluoranthene | 205-99-2 | 252.32 | 1.23E+06 | 1 | 1.11E-04 | 1 | 2.26E-02 | 1 | 5.56E-06 | 1 | 1.50E-03 | 1 |
| Benzo(k)fluoranthene | 207-08-9 | 252.32 | 1.23E+06 | 1 | 8.29E-07 | 1 | 2.26E-02 | 1 | 5.56E-06 | 1 | 8.00E-04 | 1 |
| Chrysene | 218-01-9 | 228.29 | 3.98E+05 | 1 | 9.46E-05 | 1 | 2.48E-02 | 1 | 6.21E-06 | 1 | 1.60E-03 | 1 |
| Dibenz(a,h)anthracene | 53-70-3 | 278.35 | 1.79E+06 | 1 | 1.47E-08 | 1 | 2.02E-02 | 1 | 5.18E-06 | 1 | 2.50E-03 | 1 |
| Ethyl benzene | 100-41-4 | 106.17 | 2.04E+02 | 1 | 7.88E-03 | 1 | 7.50E-02 | 1 | 7.80E-06 | 1 | 1.69E+02 | 1 |
| Fluoranthene | 206-44-0 | 202.26 | 4.91E+04 | 1 | 1.61E-05 | 1 | 3.02E-02 | 1 | 6.35E-06 | 1 | 2.06E-01 | 1 |
| Fluorene | 86-73-7 | 166.22 | 7.71E+03 | 1 | 6.36E-05 | 1 | 3.63E-02 | 1 | 7.88E-06 | 1 | 1.98E+00 | 1 |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 276.34 | 3.47E+06 | 1 | 1.60E-06 | 1 | 1.90E-02 | 1 | 5.66E-06 | 1 | 2.20E-05 | 1 |
| Lead (inorganic) | 7439-92-1 | 207.2 | ******** | ******** | ******** | ******** | ******** | ******** | ******** | ******** | ******** | ******** |
| Methyl ethyl ketone | 78-93-3 | 72.11 | 1.23E+00 | 4 | 5.60E-05 | 2 | 8.08E-02 | E | 9.80E-06 | E | 2.20E+05 | 2 |
| Methyl isobutyl ketone | 108-10-1 | 100.16 | 6.20E+00 | 4 | 1.40E-04 | 2 | 7.50E-02 | 3 | 7.80E-06 | 3 | 1.90E+04 | 2 |
| Methylnaphthalene,2- | 91-57-6 | 142.2 | 2.24E+03 | 3 | 5.80E-05 | 3 | 4.80E-02 | 3 | 7.84E-06 | 3 | 2.46E+01 | 2 |
| MTBE (methyl tert-butyl ether) | 1634-04-4 | 83.1 | 1.12E+01 | 6 | 5.87E-04 | 6 | 1.02E-01 | 3 | 1.05E-05 | 3 | 5.10E+04 | 6 |
| Naphthalene | 91-20-3 | 128.17 | 1.19E+03 | 1 | 4.83E-04 | 1 | 5.90E-02 | 1 | 7.50E-06 | 1 | 3.10E+01 | 1 |
| Phenanthrene | 85-01-8 | 178.24 | 4.80E+03 | 2 | 2.33E-05 | 2 | 3.24E-02 | E | 7.74E-06 | E | 1.15E+00 | 2 |
| Pyrene | 129-00-0 | 202.26 | 6.80E+04 | 1 | 1.10E-05 | 1 | 2.72E-02 | 1 | 7.24E-06 | 1 | 1.35E-01 | 1 |
| Toluene | 108-88-3 | 92.14 | 1.40E+02 | 1 | 6.64E-03 | 1 | 8.70E-02 | 1 | 8.60E-06 | 1 | 5.26E+02 | 1 |
| Xylene(mixed) | 1330-20-7 | 106.17 | 1.29E+02 | 4 | 7.60E-03 | 1 | 7.00E-02 | 1 | 7.80E-06 | 1 | 1.60E+02 | 1 |
| Aliphatics C6-C8 | NA | 100 | 3.98E+03 | 10 | 1.22E+00 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |
| Aliphatics >C8-C10 | NA | 130 | 3.16E+04 | 10 | 1.95E+00 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |
| Aliphatics >C10-C12 | NA | 160 | 2.51E+05 | 10 | 2.93E+00 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |
| Aliphatics >C12-C16 | NA | 200 | 5.01E+06 | 10 | 1.27E+01 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |
| Aliphatics >C16-C35 | NA | 270 | 6.31E+08 | 10 | 1.20E+02 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |

NOTE: See end of table for designation of numbers and letter.

LDEQ RECAP
APPENDIX I
TABLE I18
CHEMICAL AND PHYSICAL PARAMETERS

| COMPOUND | CAS # | MOL. WT | Koc | REF | H | REF | Da | REF | Dw | REF | S | REF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | g/g-mole | cm3/g | | atm-m3/mol | | cm2/s | | cm2/s | | mg/L | |
| Aromatics >C8-C10 | NA | 120 | 1.58E+03 | 10 | 1.17E-02 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |
| Aromatics >C10-C12 | NA | 130 | 2.51E+03 | 10 | 3.41E-03 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |
| Aromatics >C12-C16 | NA | 150 | 5.01E+03 | 10 | 1.29E-03 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |
| Aromatics >C16-C21 | NA | 190 | 1.58E+04 | 10 | 3.17E-04 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |
| Aromatics >C21-C35 | NA | 240 | 1.26E+05 | 10 | 1.63E-05 | 10 | 1.00E-01 | 10 | 1.00E-05 | 10 | ******** | ******** |

* If data on more than one isomer is available then used most protective. If data available on only one isomer than used that data.

1. Soil Screening Guidance, 1996.
2. Superfund Chemical Data Matrix, June 1996.
3. Air Emissions Models for Waste and Wastewater, EPA-453/R-94-080A, 1994.
4. Groundwater Chemicals Desk Reference, Montgomery, J. H., et.al., 1990.
5. Groundwater Chemicals Desk Reference, vol. II, Montgomery, J. H., et.al., 1991.
6. Handbook of Environmental Fate and Exposure Data for Organic Chemicals, vol. IV, 1991.
7. Handbook of Environmental Fate and Exposure Data for Organic Chemicals, vol. II, 1991.
8. Soil Chemistry of Hazardous Materials, 1988.
9. CHEMDAT 8, November, 1994.
10. Total Petroleum Hydrocarbon Criteria Workgroup, 1996.

E - Estimated.

LDEQ RECAP
APPENDIX I
QUANTITATION LIMITS USED IN RECAP

| COMPOUND | Soil | GW |
|---|---|---|
| | mg/kg | mg/l |
| Acenaphthene | | 1.0E-02 |
| Acenaphthylene | | |
| Anthracene | | 1.0E-02 |
| Benzene | | |
| Benz(a)anthracene | | 7.8E-03 |
| Benzo(a)pyrene | 3.3E-01 | |
| Benzo(b)fluoranthene | | 4.8E-03 |
| Benzo(k)fluoranthene | | 2.5E-03 |
| Chrysene | | 1.5E-03 |
| Dibenz(a,h)anthracene | 3.3E-01 | 2.5E-03 |
| Ethyl benzene | | |
| Fluoranthene | | 1.0E-02 |
| Fluorene | | 1.0E-02 |
| Indeno(1,2,3-cd)pyrene | | 3.7E-03 |
| Lead (inorganic) | | |
| Methyl ethyl ketone | | 1.0E-01 |
| Methyl isobutyl ketone | | 5.0E-02 |
| Methylnaphthalene,2- | | |
| MTBE (methyl tert-butyl ether) | | 5.0E-04 |
| Naphthalene | | 1.0E-02 |
| Phenanthrene | | |
| Pyrene | | 1.0E-02 |
| Toluene | | |
| Xylene(mixed) | | |
| Aliphatics C6-C8 | | 1.5E-01 |
| Aliphatics >C8-C10 | | 1.5E-01 |
| Aliphatics >C10-C12 | | 1.5E-01 |
| Aliphatics >C12-C16 | | 1.5E-01 |
| Aliphatics >C16-C35 | | 1.5E-01 |
| Aromatics >C8-C10 | | 1.5E-01 |
| Aromatics >C10-C12 | | 1.5E-01 |
| Aromatics >C12-C16 | | 1.5E-01 |
| Aromatics >C16-C21 | | 1.5E-01 |
| Aromatics >C21-C35 | | 1.5E-01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Soil properties** | | Management Option 2 | | | | | | | |
| Revision Date: 08/04/2003 | | | | | | | | | |
| Run date: | 10/16/2003 | | | | | | | | |
| | | | | | | | | | |
| *****calculation inputs***** | | | | | | | | | |
| 1.7 | g/cm3 | | pb = dry soil bulk density | | | | | | |
| 0.358491 | Lpore/Lsoil | | n = total soil porosity | | | | | | |
| 0.21 | Lwater/Lsoil | | nw = water-filled soil porosity | | | | | | |
| 0.148491 | Lair/Lsoil | | na = air-filled soil porosity | | | | | | |
| 2.65 | g/cm3 | | ps = soil particle density | | | | | | |
| 0.006 | g/g | | foc = fractional organic carbon in soil | | | | | | |
| 148 | (ft) = L = length of the source at the water table | | | | | | | | |
| 148 | (ft) = W = width of impacted area perpendicular to flow direction of aquifer | | | | | | | | |
| 0.5 | Acres | | AOI site area - input into Q/C equation below | | | | | | |
| 76.30616 | g/m2-s per kg/m3 | | Q/C = inverse of mean concentration at center of square source | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| **Q/C Table** | | | | | | | | | |
| site size | 148*148 | 209*209 | 295*295 | 467*467 | 660*660 | 1143*1143 | | | |
| site size | 0.5 acre | 1 acre | 2 acre | 5 acre | 10 acre | 30 acre | | | |
| Q/C value | 76.3062 | 67.4304 | 59.872 | 51.4648 | 46.1707 | 39.2329 | | | |

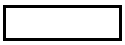
LDEQ RECAP
WORKSHEET I7
SUMMER'S DAF

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Sd eqn & Summer's Model DAF** | | | | | | | |
| Revision Date: 08/04/2003 | | | | | | | |
| Run date: | 10/16/2003 | | | | | | |
| | | | | | | | |
| **Sd = hadv + hdisp = thickness of the mixing zone** | | | | | | | |
| 15.6 | (ft) | | | | | | |
| | | | | | | | |
| hadv = B*[1 - exp((-I*L)/(B*Dv))] | | | | | | | |
| 0.81 | (ft) = hadv = advective component of the plume depth | | | | | | |
| 0.33 | (ft/ft) = I = infiltration rate | | | | | | |
| 60.00 | (ft/yr) = Dv = horizontal Darcy velocity | | | | | | |
| 20.00 | (ft) = B = thickness of the shallow water bearing zone | | | | | | |
| 148.00 | (ft) = L = length of the source at the water table | | | | | | |
| | | | | | | | |
| hdisp = (2*Az*L) | | | | | | | |
| 14.80 | (ft) = hdisp = dispersive component of the plume depth | | | | | | |
| 0.74 | (ft) = Az = vertical dispersivity | | | | | | |
| 148.00 | (ft) = L = length of the source at the water table | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| **Summer's Model DAF** | | | | | | | |
| DAF = Cl/Cgw = (Qa+Qp)/Qp | | | | | | | |
| 20.0 | unitless | | | | | | |
| | | | | | | | |
| Qa = Dv*Sd*W | | | | | | | |
| 138577 | (ft3/yr) = Qa = volumetric flow rate of groundwater | | | | | | |
| 60.00 | (ft/yr) = Dv = horizontal Darcy velocity | | | | | | |
| 15.61 | (ft) = Sd = hadv + hdisp = thickness of the mixing zone | | | | | | |
| 148.00 | (ft) = W = width of impacted area perpendicular to flow direction of aquifer | | | | | | |
| | | | | | | | |
| Qp = I*A | | | | | | | |
| 7301.33 | (ft3/yr) = Qp = volumetric flow rate of infiltration (soil pore water ) into the aquifer | | | | | | |
| 0.33 | (ft/yr) = I = infiltration rate | | | | | | |
| 21904.00 | (ft2) = A = area of the source | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Max DF Domenico | | #NAME? | | | | | |
| (for use with SoilGW and GW values) | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Domenico Analytical Solute Transport Model** | | | | | **Appendix I** | | | |
| Revision Date: 08/04/2003 | | | | | | | | |
| Run date: | 10/16/2003 | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| General assumptions: | | | | | | | | |
| 1. A single continuous source of one chemical compound dissolved | | | | | | | | |
| in the groundwater. No NAPL. | | | | | | | | |
| 2. No initial groundwater contamination. | | | | | | | | |
| 3. Chemical compound is non-reactive. | | | | | | | | |
| 4. No biodegradation or retardation occuring. | | | | | | | | |
| 5. Groundwater flow is in one direction. | | | | | | | | |
| 6. Saturated zone is homogeneous and isotropic | | | | | | | | |
| 7. Contaminant plume is a planar source spreading infinitely | | | | | | | | |
| laterally in two directions and vertically in one direction. | | | | | | | | |
| 8. The point "X" is behind the point where "X = v * time since spill" | | | | | | | | |
| 9. Longitudinal, transverse, and vertical groundwater dispersivities | | | | | | | | |
| are based on ASTM E 1739-95 example. | | | | | | | | |
| 10. The DAF is based on the estimated contaminant concentration (Cxi) | | | | | | | | |
| at the center line of the plume. | | | | | | | | |
| | | | | | | | | |
| **Example Calculation of the Groundwater Dilution Attenuation Factor** | | | | | | | | |
| | | | | | | | | |
| Site-specific inputs: | | | | | | | | |
| 2000 | (ft) = X = distance downgradient from source. | | | | | | | |
| 15.6 | (ft) = Sd = vertical depth of plume (measured vertical extent | | | | | | | |
| | of affected groundwater plume or the full thickness | | | | | | | |
| | of the groundwater stratum). Based on site size. | | | | | | | |
| 148 | (ft) = Sw = groundwater plume width perpendicular to | | | | | | | |
| | groundwater flow. (See Soil properties page to input.) | | | | | | | |
| | | | | | | | | |
| Defaults: | | | | | | | | |
| 60 | (ft/yr) = Dv = K * i = Darcy groundwater velocity. | | | | | | | |
| 0.36 | (dimensionless) = O = soil porosity. | | | | | | | |
| 166.66667 | (ft/yr) = Dv / O = v = linear Darcy groundwater transport velocity. | | | | | | | |
| | | | | | | | | |
| 200 | (ft) = X * 0.1 = Ax = longitudinal groundwater dispersivity. | | | | | | | |
| 66.666667 | (ft) = Ax / 3 = Ay = transverse groundwater dispersivity. | | | | | | | |
| 10 | (ft) = Ax / 20 = Az = vertical groundwater dispersivity. | | | | | | | |
| | | | | | | | | |
| 1 | (dimensionless) = Ri = retardation factor for constituent i. | | | | | | | |
| 0 | (yr-1) = Yi = first-order degradation constant for constituent i. | | | | | | | |
| | | | | | | | | |
| Model equation: | | | | | | | | |
| (Csi/Cxi)= DAF = | | 1/((EXP((X/(2*Ax))*(1-(SQRT(1+(4*Yi*Ax*Ri/v)))))) | | | | | | |
| | | *(ERF(Sw/(4*(SQRT(Ay*X)))))*(ERF(Sd/(2*(SQRT(Az*X))))) | | | | | | |
| | = | #NAME? | (dimensionless) | | | | | |

LDEQ RECAP
WORKSHEET I8
DOMENICO DAF

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | Appendix I - DAF | | | | |
| X (ft) = distance | | | | (dimensionless) | | | | |
| downgradient from | | Sw or L= | 30 ft | 65 ft | 100 ft | 148 ft | | |
| source = | | Sd = | 3.2 ft | 6.9 ft | 10.5 ft | 15.6 ft | | |
| 0 - 50 | | | 2.8 | 1.2 | 1.0 | 1.0 | | |
| 50 - 100 | | | 9.1 | 2.5 | 1.5 | 1.1 | | |
| 100 - 150 | | | 20 | 4.7 | 2.4 | 1.5 | | |
| 150 - 250 | | | 53 | 12 | 5.5 | 2.9 | | |
| 250 - 500 | | | 212 | 46 | 20 | 9.4 | | |
| 500 - 750 | | | 476 | 102 | 44 | 20 | | |
| 750 - 1000 | | | 846 | 182 | 78 | 36 | | |
| 1000 - 1250 | | | 1321 | 283 | 121 | 56 | | |
| 1250 - 1500 | | | 1902 | 408 | 174 | 80 | | |
| 1500 - 1750 | | | 2588 | 555 | 237 | 108 | | |
| 1750 - 2000 | | | 3380 | 724 | 310 | 141 | | |



LDEQ RECAP
WORKSHEET I1
GW 1 AND 2
(mg/l)

Appendix I **Groundwater Classification 1 & 2**
Revision Date: 08/04/2003 Run date: 10/16/2003

C(mg/l)-Vol GW1&2 = (TR*ATc*365)/(EFni*((SFi*Kw*IRAadj)+(SFo*IRWadj)))
C(mg/l)-NVol GW1&2 = (TR*ATc*365)/(EFni*(SFo*IRWadj))
N(mg/l)-Vol GW1&2 = (THQ*BWa*ATnni*365)/(EFni*EDni*(((IRAa/RfDi)*Kw)+(IRWa/RfDo)))
N(mg/l)-NVol GW1&2 = (THQ*BWa*ATnni*365)/(EFni*EDni*(IRWa/RfDo))

| COMPOUND | MCL (mg/l) | C(mg/l)-V | C(mg/l)-NV | N(mg/l)-V | N(mg/l)-NV | MCL or min value (C or N) | GW1 (mg/l) | | GW2 (mg/l) | | FOR CAL SOILGW1 | FOR CAL SOILGW2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | | NA | | 3.65E-01 | | 3.7E-01 | 3.7E-01 | N | 3.7E-01 | X DF 2 | 3.7E-01 | 3.7E-01 |
| Acenaphthylene | | NA | | 3.65E-01 | | 3.7E-01 | 3.7E-01 | N | 3.7E-01 | X DF 2 | 3.7E-01 | 3.7E-01 |
| Anthracene | | NA | | 1.83E+00 | | 1.8E+00 | 1.8E+00 | N | 1.8E+00 | X DF 2 | 4.3E-02 | 4.3E-02 |
| Benzene | 5.00E-03 | 3.81E-04 | | 4.39E-02 | | 5.0E-03 | 5.0E-03 | MCL | 5.0E-03 | X DF 2 | 5.0E-03 | 5.0E-03 |
| Benz(a)anthracene | | | 9.09E-05 | | NA | 9.1E-05 | 7.8E-03 | Q | #NAME? | ###### | 7.8E-03 | #NAME? |
| Benzo(a)pyrene | 2.00E-04 | | 9.09E-06 | | NA | 2.0E-04 | 2.0E-04 | MCL | 2.0E-04 | X DF 2 | 2.0E-04 | 2.0E-04 |
| Benzo(b)fluoranthene | | | 9.09E-05 | | NA | 9.1E-05 | 4.8E-03 | Q | #NAME? | ###### | 1.5E-03 | #NAME? |
| Benzo(k)fluoranthene | | | 9.09E-04 | | NA | 9.1E-04 | 2.5E-03 | Q | #NAME? | ###### | 8.0E-04 | #NAME? |
| Chrysene | | | 9.09E-03 | | NA | 9.1E-03 | 9.1E-03 | C | 9.1E-03 | X DF 2 | 1.6E-03 | 1.6E-03 |
| Dibenz(a,h)anthracene | | | 9.09E-06 | | NA | 9.1E-06 | 2.5E-03 | Q | #NAME? | ###### | 2.5E-03 | #NAME? |
| Ethyl benzene | 7.00E-01 | NA | | 1.33E+00 | | 7.0E-01 | 7.0E-01 | MCL | 7.0E-01 | X DF 2 | 7.0E-01 | 7.0E-01 |
| Fluoranthene | | | NA | | 1.46E+00 | 1.5E+00 | 1.5E+00 | N | 1.5E+00 | X DF 2 | 2.1E-01 | 2.1E-01 |
| Fluorene | | NA | | 2.43E-01 | | 2.4E-01 | 2.4E-01 | N | 2.4E-01 | X DF 2 | 2.4E-01 | 2.4E-01 |
| Indeno(1,2,3-cd)pyrene | | | 9.09E-05 | | NA | 9.1E-05 | 3.7E-03 | Q | #NAME? | ###### | 2.2E-05 | #NAME? |
| Lead (inorganic) | 1.50E-02 | | NA | | NA | 1.5E-02 | 1.5E-02 | MCL | 1.5E-02 | X DF 2 | 1.5E-02 | 1.5E-02 |
| Methyl ethyl ketone | | NA | | 1.91E+00 | | 1.9E+00 | 1.9E+00 | N | 1.9E+00 | X DF 2 | 1.9E+00 | 1.9E+00 |
| Methyl isobutyl ketone | | NA | | 1.99E+00 | | 2.0E+00 | 2.0E+00 | N | 2.0E+00 | X DF 2 | 2.0E+00 | 2.0E+00 |
| Methylnaphthalene,2- | | NA | | 6.22E-03 | | 6.2E-03 | 6.2E-03 | N | 6.2E-03 | X DF 2 | 6.2E-03 | 6.2E-03 |
| MTBE (methyl tert-butyl ether) | 2.00E-02 | NA | | 5.21E+00 | | 2.0E-02 | 2.0E-02 | T | 2.0E-02 | X DF 2 | 2.0E-02 | 2.0E-02 |
| Naphthalene | | NA | | 6.22E-03 | | 6.2E-03 | 1.0E-02 | Q | #NAME? | ###### | 1.0E-02 | #NAME? |
| Phenanthrene | | NA | | 1.83E+00 | | 1.8E+00 | 1.8E+00 | N | 1.8E+00 | X DF 2 | 1.2E+00 | 1.2E+00 |
| Pyrene | | NA | | 1.83E-01 | | 1.8E-01 | 1.8E-01 | N | 1.8E-01 | X DF 2 | 1.4E-01 | 1.4E-01 |
| Toluene | 1.00E+00 | NA | | 7.47E-01 | | 1.0E+00 | 1.0E+00 | MCL | 1.0E+00 | X DF 2 | 1.0E+00 | 1.0E+00 |
| Xylene(mixed) | 1.00E+01 | NA | | 2.06E-01 | | 1.0E+01 | 1.0E+01 | MCL | 1.0E+01 | X DF 2 | 1.0E+01 | 1.0E+01 |

LDEQ RECAP
WORKSHEET I1
GW 1 AND 2
(mg/l)

Appendix I **Groundwater Classification 1 & 2**
Revision Date: 08/04/2003 Run date: 10/16/2003

C(mg/l)-Vol GW1&2 = (TR*ATc*365)/(EFni*((SFi*Kw*IRAadj)+(SFo*IRWadj)))
C(mg/l)-NVol GW1&2 = (TR*ATc*365)/(EFni*(SFo*IRWadj))
N(mg/l)-Vol GW1&2 = (THQ*BWa*ATnni*365)/(EFni*EDni*(((IRAa/RfDi)*Kw)+(IRWa/RfDo)))
N(mg/l)-NVol GW1&2 = (THQ*BWa*ATnni*365)/(EFni*EDni*(IRWa/RfDo))

| | | | | | | MCL or | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MCL | | | | | min value | GW1 | | GW2 | | FOR CAL | FOR CAL |
| COMPOUND | (mg/l) | C(mg/l)-V | C(mg/l)-NV | N(mg/l)-V | N(mg/l)-NV | (C or N) | (mg/l) | | (mg/l) | | SOILGW1 | SOILGW2 |
| Aliphatics C6-C8 | | NA | | 3.19E+01 | | 3.2E+01 | 3.2E+01 | N | 3.2E+01 | X DF 2 | 3.2E+01 | 3.2E+01 |
| Aliphatics >C8-C10 | | NA | | 1.34E+00 | | 1.3E+00 | 1.3E+00 | N | 1.3E+00 | X DF 2 | 1.3E+00 | 1.3E+00 |
| Aliphatics >C10-C12 | | NA | | 1.37E+00 | | 1.4E+00 | 1.4E+00 | N | 1.4E+00 | X DF 2 | 1.4E+00 | 1.4E+00 |
| Aliphatics >C12-C16 | | NA | | 1.37E+00 | | 1.4E+00 | 1.4E+00 | N | 1.4E+00 | X DF 2 | 1.4E+00 | 1.4E+00 |
| Aliphatics >C16-C35 | | | NA | | 7.30E+01 | 7.3E+01 | 7.3E+01 | N | 7.3E+01 | X DF 2 | 7.3E+01 | 7.3E+01 |
| Aromatics >C8-C10 | | NA | | 3.37E-01 | | 3.4E-01 | 3.4E-01 | N | 3.4E-01 | X DF 2 | 3.4E-01 | 3.4E-01 |
| Aromatics >C10-C12 | | NA | | 3.37E-01 | | 3.4E-01 | 3.4E-01 | N | 3.4E-01 | X DF 2 | 3.4E-01 | 3.4E-01 |
| Aromatics >C12-C16 | | NA | | 3.37E-01 | | 3.4E-01 | 3.4E-01 | N | 3.4E-01 | X DF 2 | 3.4E-01 | 3.4E-01 |
| Aromatics >C16-C21 | | | NA | | 1.10E+00 | 1.1E+00 | 1.1E+00 | N | 1.1E+00 | X DF 2 | 1.1E+00 | 1.1E+00 |
| Aromatics >C21-C35 | | | NA | | 1.10E+00 | 1.1E+00 | 1.1E+00 | N | 1.1E+00 | X DF 2 | 1.1E+00 | 1.1E+00 |
| TPH-GRO (C6-C10) | | | | | | | 3.4E-01 | | 3.4E-01 | | | |
| TPH-DRO (C10-C28) | | | | | | | 3.4E-01 | | 3.4E-01 | | | |
| TPH-ORO (>C28) | | | | | | | 1.1E+00 | | 1.1E+00 | | | |

T - For MTBE the listed value is the EPA taste/odor advisory value.

LDEQ RECAP
WORKSHEET I2
GW 3NDW
(mg/l)

Appendix I **Groundwater Classification 3-Non-drinking water**
Revision Date: 08/04/2003 Run date: 10/16/2003

C (mg/l) GW3NDW = (TR*BWa) / (SFo*(IRWndw+BCF*IRF))
N (mg/l) GW3NDW = (THQ*RfDo*BWa) / (IRWndw+BCF*IRF)

| | LAC 33:IX. 1113(HHNDW) | LAC 33:IX. 1113(HHDW) | MCL | BCF | | | LAC(NDW) or max (LAC,MCL, (MIN C, N)) | |
|---|---|---|---|---|---|---|---|---|
| **COMPOUND** | **(mg/L)** | **(mg/L)** | **(mg/l)** | **(l/kg)** | **C (mg/l)** | **N (mg/l)** | **(mg/l)** | |
| Acenaphthene | | | | 3.87E+02 | NA | 5.36E-01 | 5.4E-01 | (*2)N |
| Acenaphthylene | | | | 2.69E+02 | NA | 7.68E-01 | 7.7E-01 | (*2)N |
| Anthracene | | | | 9.20E+03 | NA | 1.14E-01 | 1.1E-01 | (*2)N |
| Benzene | 1.25E-02 | 1.10E-03 | 5.00E-03 | | | | 1.3E-02 | (*1)LAC(NDW) |
| Benz(a)anthracene | | | | 1.26E+04 | 3.80E-07 | NA | 3.8E-07 | (*2)C |
| Benzo(a)pyrene | | | 2.00E-04 | 8.29E+04 | 5.78E-09 | NA | 2.0E-04 | MCL |
| Benzo(b)fluoranthene | | | | 3.03E+04 | 1.58E-07 | NA | 1.6E-07 | (*2)C |
| Benzo(k)fluoranthene | | | | 3.03E+04 | 1.58E-06 | NA | 1.6E-06 | (*2)C |
| Chrysene | | | | 1.26E+04 | 3.80E-05 | NA | 3.8E-05 | (*2)C |
| Dibenz(a,h)anthracene | | | | 7.28E+04 | 6.59E-09 | NA | 6.6E-09 | (*2)C |
| Ethyl benzene | 8.10E+00 | 2.39E+00 | 7.00E-01 | | | | 8.1E+00 | (*1)LAC(NDW) |
| Fluoranthene | | | | 4.43E+03 | NA | 3.16E-02 | 3.2E-02 | (*2)N |
| Fluorene | | | | 1.80E+03 | NA | 7.76E-02 | 7.8E-02 | (*2)N |
| Indeno(1,2,3-cd)pyrene | | | | 7.28E+04 | 6.59E-08 | NA | 6.6E-08 | (*2)C |
| Lead (inorganic) | | 5.00E-02 | 1.50E-02 | | NA | NA | 5.0E-02 | LAC(DW) |
| Methyl ethyl ketone | | | | 9.61E-01 | NA | 3.88E+02 | 3.9E+02 | (*2)N |
| Methyl isobutyl ketone | | | | 4.81E+00 | NA | 3.02E+01 | 3.0E+01 | (*2)N |
| Methylnaphthalene,2- | | | | 2.60E+03 | NA | 2.69E-02 | 2.7E-02 | (*2)N |
| MTBE (methyl tert-butyl ether) | | | 2.00E-02 | 1.00E+00 | NA | 5.50E+02 | 5.5E+02 | (*2)N |
| Naphthalene | | | | 3.10E+02 | NA | 2.23E-01 | 2.2E-01 | (*2)N |
| Phenanthrene | | | | 5.10E+03 | NA | 2.06E-01 | 2.1E-01 | (*2)N |
| Pyrene | | | | 6.90E+01 | NA | 1.43E+00 | 1.4E+00 | (*2)N |
| Toluene | 4.62E+01 | 6.10E+00 | 1.00E+00 | | | | 4.6E+01 | (*1)LAC(NDW) |
| Xylene(mixed) | | | 1.00E+01 | 1.59E+02 | NA | 4.28E+00 | 1.0E+01 | MCL |
| Aliphatics C6-C8 | | | | 0.00E+00 | NA | 3.93E+03 | 3.9E+03 | (*2)N |
| Aliphatics >C8-C10 | | | | 0.00E+00 | NA | 7.87E+01 | 7.9E+01 | (*2)N |
| Aliphatics >C10-C12 | | | | 0.00E+00 | NA | 7.87E+01 | 7.9E+01 | (*2)N |
| Aliphatics >C12-C16 | | | | 0.00E+00 | NA | 7.87E+01 | 7.9E+01 | (*2)N |

LDEQ RECAP
WORKSHEET I2
GW 3NDW
(mg/l)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Aliphatics >C16-C35 | | | | 0.00E+00 | NA | 1.57E+03 | 1.6E+03 | (*2)N |
| Aromatics >C8-C10 | | | | 0.00E+00 | NA | 3.15E+01 | 3.1E+01 | (*2)N |
| Aromatics >C10-C12 | | | | 0.00E+00 | NA | 3.15E+01 | 3.1E+01 | (*2)N |
| Aromatics >C12-C16 | | | | 0.00E+00 | NA | 3.15E+01 | 3.1E+01 | (*2)N |
| Aromatics >C16-C21 | | | | 0.00E+00 | NA | 2.36E+01 | 2.4E+01 | (*2)N |
| Aromatics >C21-C35 | | | | 0.00E+00 | NA | 2.36E+01 | 2.4E+01 | (*2)N |
| TPH-GRO (C6-C10) | | | | | | | 3.1E+01 | |
| TPH-DRO (C10-C28) | | | | | | | 2.4E+01 | |
| TPH-ORO (>C28) | | | | | | | 2.4E+01 | |

References: Data hierarchy is based on (*1) then (*2).

(*1) Louisiana Administrative Code 33.IX.1113, Table 1 (HHNDW)

(*2) The maximum value of LAC 33.IX1113 (DW), MCL, or the minimum of
human health non-drinking water criteria calculated in accordance with "Human Health Numerical Criteria Derivations for Toxic Substances", LDEQ-OWR, June 23, 1994; (N=non-carcinogen, C=carcinogen)

Notes:

* BCF values from the Superfund Chemical Data Matrix, June 1996

* BCF values not found in the Superfund Chemical Data Matrix are estimated below

T - For MTBE the listed value is the EPA taste/odor advisory value.

LDEQ RECAP
WORKSHEET I2
GW 3NDW
(mg/l)

Estimation of BCF from Kow:
log BCF = 0.76 log Kow - 0.23
(from the Handbook of Chemical Property Estimation Methods, Lyman, Reehl, and Rosenblatt,
American Chemical Society, Washington, DC, 1990)

| | | | | | log Kow | log BCF | BCF | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| Acenaphthylene | | | | | 3.5 | 2.43 | 2.69E+02 | |
| Acetone | | | | | -2.4E-01 | -0.4124 | 3.87E-01 | |
| Aniline | | | | | 9.8E-01 | 0.5148 | 3.27E+00 | |
| Barium (ionic) | | | | | | | 1.00E+00 | (1) |
| Benz(a)anthracene | | | | | 5.7E+00 | 4.102 | 1.26E+04 | |
| Benzo(b)fluoranthene | | | | | 6.2E+00 | 4.482 | 3.03E+04 | |
| Benzo(k)fluoranthene | | | | | 6.2E+00 | 4.482 | 3.03E+04 | |
| Biphenyl, 1,1- | | | | | 4.0E+00 | 2.81 | 6.46E+02 | |
| Bis(2-chloroisopropyl)ether | | | | | 2.6E+00 | 1.746 | 5.57E+01 | |
| Bromomethane | | | | | 1.2E+00 | 0.682 | 4.81E+00 | |
| Carbon disulfide | | | | | 2.0E+00 | 1.29 | 1.95E+01 | |
| Chloroaniline, p- | | | | | 1.9E+00 | 1.214 | 1.64E+01 | |
| Chlorobenzene | | | | | 2.9E+00 | 1.974 | 9.42E+01 | |
| Chloroethane (ethylchloride) | | | | | 1.4E+00 | 0.834 | 6.82E+00 | |
| Chloromethane(Methyl chloride) | | | | | 9.1E-01 | 0.4616 | 2.89E+00 | |
| Chloronaphthalene, 2- | | | | | 4.1E+00 | 2.886 | 7.69E+02 | |
| Chromium (III) | | | | | | | 1.00E+00 | (1) |
| Chromium (VI) | | | | | | | 1.00E+00 | (1) |
| Chrysene | | | | | 5.7E+00 | 4.102 | 1.26E+04 | |
| Cobalt | | | | | | | 1.00E+00 | (1) |
| Dibenz(a,h)anthracene | | | | | 6.7E+00 | 4.862 | 7.28E+04 | |
| Dibenzofuran | | | | | 4.2E+00 | 2.962 | 9.16E+02 | |
| Dibromo-3-chloropropane,1,2- | | | | | 2.3E+00 | 1.518 | 3.30E+01 | |
| Dichloroethane, 1,1- | | | | | 1.8E+00 | 1.138 | 1.37E+01 | |
| Dichloroethene, cis, 1,2- | | | | | 1.9E+00 | 1.214 | 1.64E+01 | |
| Dichloroethene, trans, 1,2- | | | | | 2.1E+00 | 1.366 | 2.32E+01 | |
| Dichloropropane, 1,2- | | | | | 2.0E+00 | 1.29 | 1.95E+01 | |
| Dinitrobenzene, 1,3- | | | | | 1.5E+00 | 0.91 | 8.13E+00 | |
| Dinitrophenol, 2,4- | | | | | 1.6E+00 | 0.986 | 9.68E+00 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Dinitrotoluene, 2,6- | | | | | 1.9E+00 | 1.214 | 1.64E+01 | |
| Dinitrotoluene, 2,4- | | | | | 2.0E+00 | 1.29 | 1.95E+01 | |
| Dinoseb | | | | | 3.1E+00 | 2.126 | 1.34E+02 | |
| Fluroanthene | | | | | 5.1E+00 | 3.646 | 4.43E+03 | |
| Hexachlorocyclopentadiene | | | | | 5.4E+00 | 3.874 | 7.48E+03 | |
| Indeno(1,2,3-cd)pyrene | | | | | 6.7E+00 | 4.862 | 7.28E+04 | |
| Isobutyl alcohol | | | | | 7.5E-01 | 0.34 | 2.19E+00 | |
| Methyl ethyl ketone | | | | | 2.8E-01 | -0.0172 | 9.61E-01 | |
| Methyl isobutyl ketone | | | | | 1.2E+00 | 0.682 | 4.81E+00 | |
| MTBE | | | | | | | 1.00E+00 | (1) |
| Nitrate | | | | | | | 1.00E+00 | (1) |
| Nitrite | | | | | | | 1.00E+00 | (1) |
| Nitroaniline, 2- | | | | | 1.9E+00 | 1.214 | 1.64E+01 | |
| Nitroaniline, 3- | | | | | 1.4E+00 | 0.834 | 6.82E+00 | |
| Nitroaniline, 4- | | | | | 1.4E+00 | 0.834 | 6.82E+00 | |
| Nitrobenzene | | | | | 1.8E+00 | 1.138 | 1.37E+01 | |
| Nitrophenol, 4- | | | | | 1.9E+00 | 1.214 | 1.64E+01 | |
| Nitrosodi-n-propylamine, n- | | | | | 1.4E+00 | 0.834 | 6.82E+00 | |
| Phenol | | | | | 1.5E+00 | 0.91 | 8.13E+00 | |
| Styrene | | | | | 2.9E+00 | 1.974 | 9.42E+01 | |
| Tetrachlorobenzene,1,2,4,5- | | | | | 4.6E+00 | 3.266 | 1.85E+03 | |
| Tetrachloroethane,1,1,1,2- | | | | | 2.6E+00 | 1.746 | 5.57E+01 | |
| Trichlorofluoromethane | | | | | 2.5E+00 | 1.67 | 4.68E+01 | |
| Trichlorophenol, 2,4,5- | | | | | 3.9E+00 | 2.734 | 5.42E+02 | |
| Trichlorophenol, 2,4,6- | | | | | 3.7E+00 | 2.582 | 3.82E+02 | |
| Vanadium | | | | | | | 1.00E+00 | (1) |
| Xylene (mixed) | | | | | 3.2E+00 | 2.202 | 1.59E+02 | |
| Aliphatics C6-C8 | | | | | | | 0.00E+00 | (2) |
| Aliphatics >C8-C10 | | | | | | | 0.00E+00 | (2) |
| Aliphatics >C10-C12 | | | | | | | 0.00E+00 | (2) |
| Aliphatics >C12-C16 | | | | | | | 0.00E+00 | (2) |
| Aliphatics >C16-C35 | | | | | | | 0.00E+00 | (2) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Aromatics >C8-C10 | | | | | | | 0.00E+00 | (2) |
| Aromatics >C10-C12 | | | | | | | 0.00E+00 | (2) |
| Aromatics >C12-C16 | | | | | | | 0.00E+00 | (2) |
| Aromatics >C16-C21 | | | | | | | 0.00E+00 | (2) |
| Aromatics >C21-C35 | | | | | | | 0.00E+00 | (2) |

Notes:

log Kow values from the Superfund Data Matrix, June 1996

(1) Data on this chemical could not be found. Therefore, assume BCF = 1

Xylene (mixed) Kow is the highest value of m,o,p xylene Kow values.

(2) Research has shown that this chemical does not bioconcentrate.

Estimation of Kow from Koc:

log Koc = 0.0784 + (0.7919 * log Kow)

(p 141 Soil Screening Guidance: Technical Background Document, May 1996)

LDEQ RECAP
WORKSHEET I3
GW 3DW
(mg/l)

Appendix I **Groundwater Classification 3-Drinking Water**
Revision Date: 08/04/2003 Run date: 10/16/2003

C (mg/l) GW3DW = (TR*BWa) / (SFo*(IRWa+IRWndw+BCF*IRF))
N (mg/l) GW3DW = (THQ*RfDo*BWa) / (IRWa+IRWndw+BCF*IRF)

| | LAC 33:IX. | | | | | LAC, MCL or | |
|---|---|---|---|---|---|---|---|
| | 1113(HHDW) | MCL | BCF | | | min (C,N) | |
| **COMPOUND** | **(mg/L)** | **(mg/l)** | **(l/kg)** | **C (mg/l)** | **N (mg/l)** | **(mg/l)** | |
| Acenaphthene | | | 3.87E+02 | NA | 4.27E-01 | 4.3E-01 | (*3)N |
| Acenaphthylene | | | 2.69E+02 | NA | 5.62E-01 | 5.6E-01 | (*3)N |
| Anthracene | | | 9.20E+03 | NA | 1.13E-01 | 1.1E-01 | (*3)N |
| Benzene | 1.10E-03 | 5.00E-03 | | | | 1.1E-03 | (*1)LAC |
| Benz(a)anthracene | | | 1.26E+04 | 3.77E-07 | NA | 3.8E-07 | (*3)C |
| Benzo(a)pyrene | | 2.00E-04 | | | | 2.0E-04 | (*2)MCL |
| Benzo(b)fluoranthene | | | 3.03E+04 | 1.58E-07 | NA | 1.6E-07 | (*3)C |
| Benzo(k)fluoranthene | | | 3.03E+04 | 1.58E-06 | NA | 1.6E-06 | (*3)C |
| Chrysene | | | 1.26E+04 | 3.77E-05 | NA | 3.8E-05 | (*3)C |
| Dibenz(a,h)anthracene | | | 7.28E+04 | 6.58E-09 | NA | 6.6E-09 | (*3)C |
| Ethyl benzene | 2.39E+00 | 7.00E-01 | | | | 2.4E+00 | (*1)LAC |
| Fluoranthene | | | 4.43E+03 | NA | 3.09E-02 | 3.1E-02 | (*3)N |
| Fluorene | | | 1.80E+03 | NA | 7.35E-02 | 7.4E-02 | (*3)N |
| Indeno(1,2,3-cd)pyrene | | | 7.28E+04 | 6.58E-08 | NA | 6.6E-08 | (*3)C |
| Lead (inorganic) | 5.00E-02 | 1.50E-02 | | | | 5.0E-02 | (*1)LAC |
| Methyl ethyl ketone | | | 9.61E-01 | NA | 1.99E+01 | 2.0E+01 | (*3)N |
| Methyl isobutyl ketone | | | 4.81E+00 | NA | 2.56E+00 | 2.6E+00 | (*3)N |
| Methylnaphthalene,2- | | | 2.60E+03 | NA | 2.59E-02 | 2.6E-02 | (*3)N |
| MTBE (methyl tert-butyl ether) | | 2.00E-02 | | NA | 2.87E+01 | 2.0E-02 | (*2)T |
| Naphthalene | | | 3.10E+02 | NA | 1.69E-01 | 1.7E-01 | (*3)N |
| Phenanthrene | | | 5.10E+03 | NA | 2.02E-01 | 2.0E-01 | (*3)N |
| Pyrene | | | 6.90E+01 | NA | 6.05E-01 | 6.1E-01 | (*3)N |
| Toluene | 6.10E+00 | 1.00E+00 | | | | 6.1E+00 | (*1)LAC |
| Xylene(mixed) | | 1.00E+01 | | | | 1.0E+01 | (*2)MCL |
| Aliphatics C6-C8 | | | 0.00E+00 | NA | 1.68E+02 | 1.7E+02 | (*3)N |
| Aliphatics >C8-C10 | | | 0.00E+00 | NA | 3.35E+00 | 3.4E+00 | (*3)N |

LDEQ RECAP
WORKSHEET I3
GW 3DW
(mg/l)

Appendix I **Groundwater Classification 3-Drinking Water**
Revision Date: 08/04/2003 Run date: 10/16/2003

C (mg/l) GW3DW = (TR*BWa) / (SFo*(IRWa+IRWndw+BCF*IRF))
N (mg/l) GW3DW = (THQ*RfDo*BWa) / (IRWa+IRWndw+BCF*IRF)

| | LAC 33:IX. 1113(HHDW) | MCL | BCF | | | LAC, MCL or min (C,N) | |
|---|---|---|---|---|---|---|---|
| **COMPOUND** | **(mg/L)** | **(mg/l)** | **(l/kg)** | **C (mg/l)** | **N (mg/l)** | **(mg/l)** | |
| Aliphatics >C10-C12 | | | 0.00E+00 | NA | 3.35E+00 | 3.4E+00 | (*3)N |
| Aliphatics >C12-C16 | | | 0.00E+00 | NA | 3.35E+00 | 3.4E+00 | (*3)N |
| Aliphatics >C16-C35 | | | 0.00E+00 | NA | 6.70E+01 | 6.7E+01 | (*3)N |
| Aromatics >C8-C10 | | | 0.00E+00 | NA | 1.34E+00 | 1.3E+00 | (*3)N |
| Aromatics >C10-C12 | | | 0.00E+00 | NA | 1.34E+00 | 1.3E+00 | (*3)N |
| Aromatics >C12-C16 | | | 0.00E+00 | NA | 1.34E+00 | 1.3E+00 | (*3)N |
| Aromatics >C16-C21 | | | 0.00E+00 | NA | 1.01E+00 | 1.0E+00 | (*3)N |
| Aromatics >C21-C35 | | | 0.00E+00 | NA | 1.01E+00 | 1.0E+00 | (*3)N |
| TPH-GRO (C6-C10) | | | | | | 1.3E+00 | |
| TPH-DRO (C10-C28) | | | | | | 1.0E+00 | |
| TPH-ORO (>C28) | | | | | | 1.0E+00 | |

References: Data hierarchy is based on (*1), (*2), and then (*3).
(*1) Louisiana Administrative Code 33.IX.1113, Table 1
Metals criteria are hardness-dependent. Listed criteria assume a hardness value of 50 mg/L.
Site specific criteria may be calculated using the natural logarithm formulas at LAC 33:IX.1113, Table 1.
Drinking water supply is a raw water source which may require treatment before use. Defined at LAC 33:IX.1105.
(*2) EPA's Maximum Contaminant Level (MCL) for drinking water
(*3) Human health public water water supply criteria calculated in accordance with "Human Health Numerical Criteria Derivations for Toxic Substances", LDEQ-OWR, June 23, 1994; (N=non-carcinogen, C=carcinogen)
T - For MTBE the listed value is the EPA taste/odor advisory value.

LDEQ RECAP
WORKSHEET I4
SOILni
(mg/kg)

Appendix I **Soil-Nonindustrial**
Revision Date: 08/04/2003 Run date: 10/16/2003

DA = ((na^(10/3)*Da*H*41+nw^(10/3)*Dw)/n^2)/(pb*Koc*foc+nw+na*H*41)
VFnic = (Q\C*1e-4*(3.14*DA*Tnic)^0.5)/(2*pb*DA)
VFnia = (Q\C*1e-4*(3.14*DA*Tnia)^0.5)/(2*pb*DA)

Soilni-C-O = (TR*ATc*365)/(EFni*(SFo*1e-6*IRSadj+SFi*(IRAadj/VFnia)+SFo*1e-6*ABS*IRDadj))
Soilni-C-I = (TR*ATc*365)/(EFni*(SFo*1e-6*IRSadj+SFo*1e-6*ABS*IRDadj))
Soilni-N-O = (THQ*BWc*ATnc*365)/(EFni*EDc*((IRSc/RfDo)*1e-6+(IRAc/RfDi)*(1/VFnic)+(SAc/RfDo)*AFc*ABS*1e-6))
Soilni-N-I = (THQ*BWc*ATnc*365)/(EFni*EDc*((IRSc/RfDo)*1e-6+(SAc/RfDo)*AFc*ABS*1e-6)))

| COMPOUND | DA (cm2/s) | VFnic (m3/kg) | VFnia (m3/kg) | Soilni C-O (mg/kg) | Soilni C-I (mg/kg) | Soilni N-O (mg/kg) | Soilni N-I (mg/kg) | min value (C or N) | Soilni (mg/kg) | |
|---|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 7.85E-08 | 1.95E+05 | NA | NA | | 3.74E+03 | | 3.7E+03 | 3.7E+03 | N |
| Acenaphthylene | 1.50E-07 | 1.41E+05 | NA | NA | | 3.47E+03 | | 3.5E+03 | 3.5E+03 | N |
| Anthracene | 6.24E-09 | 6.93E+05 | NA | NA | | 2.19E+04 | | 2.2E+04 | 2.2E+04 | N |
| Benzene | 3.10E-04 | 3.11E+03 | 6.96E+03 | 1.49E+00 | | 3.69E+01 | | 1.5E+00 | 1.5E+00 | C |
| Benz(a)anthracene | 1.31E-10 | NA | 1.07E+07 | 6.20E-01 | | NA | | 6.2E-01 | 6.2E-01 | C |
| Benzo(a)pyrene | 4.17E-11 | NA | 1.90E+07 | 6.21E-02 | | NA | | 6.2E-02 | 3.3E-01 | Q |
| Benzo(b)fluoranthene | 1.30E-10 | NA | 1.08E+07 | 6.20E-01 | | NA | | 6.2E-01 | 6.2E-01 | C |
| Benzo(k)fluoranthene | 1.98E-11 | NA | 2.75E+07 | 6.21E+00 | | NA | | 6.2E+00 | 6.2E+00 | C |
| Chrysene | 3.85E-10 | NA | 6.25E+06 | 6.19E+01 | | NA | | 6.2E+01 | 6.2E+01 | C |
| Dibenz(a,h)anthracene | 1.22E-11 | NA | 3.51E+07 | 6.21E-02 | | NA | | 6.2E-02 | 3.3E-01 | Q |
| Ethyl benzene | 1.40E-04 | 4.63E+03 | NA | NA | | 1.64E+03 | | 1.6E+03 | 1.6E+03 | N |
| Fluoranthene | 1.08E-09 | 1.67E+06 | NA | NA | | 2.24E+03 | | 2.2E+03 | 2.2E+03 | N |
| Fluorene | 2.05E-08 | 3.82E+05 | NA | NA | | 2.77E+03 | | 2.8E+03 | 2.8E+03 | N |
| Indeno(1,2,3-cd)pyrene | 7.32E-12 | NA | 4.53E+07 | 6.21E-01 | | NA | | 6.2E-01 | 6.2E-01 | C |
| Lead (inorganic) | NA | NA | NA | NA | NA | NA | NA | NA | 0.0E+00 | |
| Methyl ethyl ketone | 1.31E-05 | 1.51E+04 | NA | NA | | 5.91E+03 | | 5.9E+03 | 5.9E+03 | N |
| Methyl isobutyl ketone | 2.24E-05 | 1.16E+04 | NA | NA | | 4.46E+03 | | 4.5E+03 | 4.5E+03 | N |
| Methylnaphthalene,2- | 8.13E-08 | 1.92E+05 | NA | NA | | 2.22E+02 | | 2.2E+02 | 2.2E+02 | N |
| MTBE (methyl tert-butyl ether) | 1.02E-04 | 5.41E+03 | NA | NA | | 6.54E+03 | | 6.5E+03 | 6.5E+03 | N |
| Naphthalene | 1.30E-06 | 4.80E+04 | NA | NA | | 6.20E+01 | | 6.2E+01 | 6.2E+01 | N |
| Phenanthrene | 1.52E-08 | 4.43E+05 | NA | NA | | 2.11E+04 | | 2.1E+04 | 2.1E+04 | N |

LDEQ RECAP
WORKSHEET I4
SOILni
(mg/kg)

Appendix I **Soil-Nonindustrial**
Revision Date: 08/04/2003 Run date: 10/16/2003

DA = ((na^(10/3)*Da*H*41+nw^(10/3)*Dw)/n^2)/(pb*Koc*foc+nw+na*H*41)
VFnic = (Q\C*1e-4*(3.14*DA*Tnic)^0.5)/(2*pb*DA)
VFnia = (Q\C*1e-4*(3.14*DA*Tnia)^0.5)/(2*pb*DA)

Soilni-C-O = (TR*ATc*365)/(EFni*(SFo*1e-6*IRSadj+SFi*(IRAadj/VFnia)+SFo*1e-6*ABS*IRDadj))
Soilni-C-I = (TR*ATc*365)/(EFni*(SFo*1e-6*IRSadj+SFo*1e-6*ABS*IRDadj))
Soilni-N-O = (THQ*BWc*ATnc*365)/(EFni*EDc*((IRSc/RfDo)*1e-6+(IRAc/RfDi)*(1/VFnic)+(SAc/RfDo)*AFc*ABS*1e-6))
Soilni-N-I = (THQ*BWc*ATnc*365)/(EFni*EDc*((IRSc/RfDo)*1e-6+(SAc/RfDo)*AFc*ABS*1e-6)))

| COMPOUND | DA (cm2/s) | VFnic (m3/kg) | VFnia (m3/kg) | Soilni C-O (mg/kg) | Soilni C-I (mg/kg) | Soilni N-O (mg/kg) | Soilni N-I (mg/kg) | min value (C or N) | Soilni (mg/kg) | |
|---|---|---|---|---|---|---|---|---|---|---|
| Pyrene | 6.85E-10 | 2.09E+06 | NA | NA | | 2.29E+03 | | 2.3E+03 | 2.3E+03 | N |
| Toluene | 1.91E-04 | 3.96E+03 | NA | NA | | 6.76E+02 | | 6.8E+02 | 6.8E+02 | N |
| Xylene(mixed) | 1.87E-04 | 4.00E+03 | NA | NA | | 1.79E+02 | | 1.8E+02 | 1.8E+02 | N |
| Aliphatics C6-C8 | 1.40E-03 | 1.46E+03 | NA | NA | | 1.18E+04 | | 1.2E+04 | 1.0E+04 | O,T |
| Aliphatics >C8-C10 | 3.22E-04 | 3.05E+03 | NA | NA | | 1.18E+03 | | 1.2E+03 | 1.2E+03 | N |
| Aliphatics >C10-C12 | 6.28E-05 | 6.90E+03 | NA | NA | | 2.29E+03 | | 2.3E+03 | 2.3E+03 | N |
| Aliphatics >C12-C16 | 1.37E-05 | 1.48E+04 | NA | NA | | 3.68E+03 | | 3.7E+03 | 3.7E+03 | N |
| Aliphatics >C16-C35 | 1.03E-06 | 5.40E+04 | NA | NA | | 7.09E+04 | | 7.1E+04 | 1.0E+04 | O,T |
| Aromatics >C8-C10 | 3.94E-05 | 8.72E+03 | NA | NA | | 6.49E+02 | | 6.5E+02 | 6.5E+02 | N |
| Aromatics >C10-C12 | 7.31E-06 | 2.02E+04 | NA | NA | | 1.18E+03 | | 1.2E+03 | 1.2E+03 | N |
| Aromatics >C12-C16 | 1.40E-06 | 4.63E+04 | NA | NA | | 1.82E+03 | | 1.8E+03 | 1.8E+03 | N |
| Aromatics >C16-C21 | 1.11E-07 | 1.64E+05 | NA | NA | | 1.48E+03 | | 1.5E+03 | 1.5E+03 | N |
| Aromatics >C21-C35 | 1.04E-09 | 1.70E+06 | NA | NA | | 1.79E+03 | | 1.8E+03 | 1.8E+03 | N |
| TPH-GRO (C6-C10) | | | | | | | | 6.5E+02 | 6.5E+02 | |
| TPH-DRO (C10-C28) | | | | | | | | 6.5E+02 | 6.5E+02 | |
| TPH-ORO (>C28) | | | | | | | | 1.8E+03 | 1.8E+03 | |

LDEQ RECAP
WORKSHEET I5
SOILi
(mg/kg)

Appendix I **Soil-Industrial**
Revision Date: 08/04/2003 Run date: 10/16/2003

DA = ((na^(10/3)*Da*H*41+nw^(10/3)*Dw)/n^2)/(pb*Koc*foc+nw+na*H*41)
VFi = (Q\C*1e-4*(3.14*DA*Ti)^0.5)/(2*pb*DA)

Soili-C-O = (TR*BWa*ATc*365)/(EFi*EDi*(SFo*1e-6*IRSi+SFi*(IRAa/VFi)+SFo*SAai*AFai*ABS*1e-6))
Soili-C-I = (TR*BWa*ATc*365)/(EFi*EDi*(SFo*1e-6*IRSi+SFo*SAai*AFai*ABS*1e-6))
Soili-N-O = (THQ*BWa*ATni*365)/(EFi*EDi*((IRSi/RfDo)*1e-6+(IRAa/RfDi)*(1/VFi)+(SAai/RfDo)*AFai*ABS*1e-6))
Soili-N-I = (THQ*BWa*ATni*365)/(EFi*EDi*((IRSi/RfDo)*1e-6+(SAai/RfDo)*AFai*ABS*1e-6)))

| | DA | VFi | Soili | Soili | Soili | Soili | min value | Soili | |
|---|---|---|---|---|---|---|---|---|---|
| **COMPOUND** | **(cm2/s)** | **(m3/kg)** | **C-O (mg/kg)** | **C-I (mg/kg)** | **N-O (mg/kg)** | **N-I (mg/kg)** | **(C or N)** | **(mg/kg)** | |
| Acenaphthene | 7.85E-08 | 3.99E+05 | NA | | 6.12E+04 | | 6.1E+04 | 6.1E+04 | N |
| Acenaphthylene | 1.50E-07 | 2.89E+05 | NA | | 5.14E+04 | | 5.1E+04 | 5.1E+04 | N |
| Anthracene | 6.24E-09 | 1.42E+06 | NA | | 4.78E+05 | | 4.8E+05 | 4.8E+05 | N |
| Benzene | 3.10E-04 | 6.35E+03 | 3.08E+00 | | 2.70E+02 | | 3.1E+00 | 3.1E+00 | C |
| Benz(a)anthracene | 1.31E-10 | 9.75E+06 | 2.87E+00 | | NA | | 2.9E+00 | 2.9E+00 | C |
| Benzo(a)pyrene | 4.17E-11 | 1.73E+07 | 2.88E-01 | | NA | | 2.9E-01 | 3.3E-01 | Q |
| Benzo(b)fluoranthene | 1.30E-10 | 9.82E+06 | 2.87E+00 | | NA | | 2.9E+00 | 2.9E+00 | C |
| Benzo(k)fluoranthene | 1.98E-11 | 2.51E+07 | 2.88E+01 | | NA | | 2.9E+01 | 2.9E+01 | C |
| Chrysene | 3.85E-10 | 5.70E+06 | 2.86E+02 | | NA | | 2.9E+02 | 2.9E+02 | C |
| Dibenz(a,h)anthracene | 1.22E-11 | 3.21E+07 | 2.88E-01 | | NA | | 2.9E-01 | 3.3E-01 | Q |
| Ethyl benzene | 1.40E-04 | 9.45E+03 | NA | | 1.29E+04 | | 1.3E+04 | 1.3E+04 | N |
| Fluoranthene | 1.08E-09 | 3.40E+06 | NA | | 2.89E+04 | | 2.9E+04 | 2.9E+04 | N |
| Fluorene | 2.05E-08 | 7.81E+05 | NA | | 5.41E+04 | | 5.4E+04 | 5.4E+04 | N |
| Indeno(1,2,3-cd)pyrene | 7.32E-12 | 4.13E+07 | 2.88E+00 | | NA | | 2.9E+00 | 2.9E+00 | C |
| Lead (inorganic) | NA | NA | NA | NA | NA | NA | NA | 0.0E+00 | |
| Methyl ethyl ketone | 1.31E-05 | 3.09E+04 | NA | | 4.35E+04 | | 4.4E+04 | 4.4E+04 | N |
| Methyl isobutyl ketone | 2.24E-05 | 2.36E+04 | NA | | 6.35E+04 | | 6.3E+04 | 6.3E+04 | N |
| Methylnaphthalene,2- | 8.13E-08 | 3.92E+05 | NA | | 1.65E+03 | | 1.7E+03 | 1.7E+03 | N |
| MTBE (methyl tert-butyl ether) | 1.02E-04 | 1.10E+04 | NA | | 4.71E+04 | | 4.7E+04 | 4.7E+04 | N |
| Naphthalene | 1.30E-06 | 9.80E+04 | NA | | 4.26E+02 | | 4.3E+02 | 4.3E+02 | N |
| Phenanthrene | 1.52E-08 | 9.06E+05 | NA | | 4.25E+05 | | 4.3E+05 | 4.3E+05 | N |
| Pyrene | 6.85E-10 | 4.27E+06 | NA | | 5.61E+04 | | 5.6E+04 | 5.6E+04 | N |

LDEQ RECAP
WORKSHEET I5
SOILi
(mg/kg)

Appendix I **Soil-Industrial**
Revision Date: 08/04/2003 Run date: 10/16/2003

DA = ((na^(10/3)*Da*H*41+nw^(10/3)*Dw)/n^2)/(pb*Koc*foc+nw+na*H*41)
VFi = (Q\C*1e-4*(3.14*DA*Ti)^0.5)/(2*pb*DA)

Soili-C-O = (TR*BWa*ATc*365)/(EFi*EDi*(SFo*1e-6*IRSi+SFi*(IRAa/VFi)+SFo*SAai*AFai*ABS*1e-6))
Soili-C-I = (TR*BWa*ATc*365)/(EFi*EDi*(SFo*1e-6*IRSi+SFo*SAai*AFai*ABS*1e-6))
Soili-N-O = (THQ*BWa*ATni*365)/(EFi*EDi*((IRSi/RfDo)*1e-6+(IRAa/RfDi)*(1/VFi)+(SAai/RfDo)*AFai*ABS*1e-6))
Soili-N-I = (THQ*BWa*ATni*365)/(EFi*EDi*((IRSi/RfDo)*1e-6+(SAai/RfDo)*AFai*ABS*1e-6)))

| | DA | VFi | Soili | Soili | Soili | Soili | min value | Soili | |
|---|---|---|---|---|---|---|---|---|---|
| **COMPOUND** | **(cm2/s)** | **(m3/kg)** | **C-O (mg/kg)** | **C-I (mg/kg)** | **N-O (mg/kg)** | **N-I (mg/kg)** | **(C or N)** | **(mg/kg)** | |
| Toluene | 1.91E-04 | 8.10E+03 | NA | | 4.66E+03 | | 4.7E+03 | 4.7E+03 | N |
| Xylene(mixed) | 1.87E-04 | 8.17E+03 | NA | | 1.21E+03 | | 1.2E+03 | 1.2E+03 | N |
| Aliphatics C6-C8 | 1.40E-03 | 2.99E+03 | NA | | 8.03E+04 | | 8.0E+04 | 1.0E+04 | O,T |
| Aliphatics >C8-C10 | 3.22E-04 | 6.23E+03 | NA | | 8.83E+03 | | 8.8E+03 | 8.8E+03 | N |
| Aliphatics >C10-C12 | 6.28E-05 | 1.41E+04 | NA | | 1.96E+04 | | 2.0E+04 | 1.0E+04 | O,T |
| Aliphatics >C12-C16 | 1.37E-05 | 3.02E+04 | NA | | 3.77E+04 | | 3.8E+04 | 1.0E+04 | O,T |
| Aliphatics >C16-C35 | 1.03E-06 | 1.10E+05 | NA | | 6.87E+05 | | 6.9E+05 | 1.0E+04 | O,T |
| Aromatics >C8-C10 | 3.94E-05 | 1.78E+04 | NA | | 5.12E+03 | | 5.1E+03 | 5.1E+03 | N |
| Aromatics >C10-C12 | 7.31E-06 | 4.13E+04 | NA | | 1.10E+04 | | 1.1E+04 | 1.0E+04 | O,T |
| Aromatics >C12-C16 | 1.40E-06 | 9.45E+04 | NA | | 2.14E+04 | | 2.1E+04 | 1.0E+04 | O,T |
| Aromatics >C16-C21 | 1.11E-07 | 3.36E+05 | NA | | 1.75E+04 | | 1.7E+04 | 1.0E+04 | O,T |
| Aromatics >C21-C35 | 1.04E-09 | 3.47E+06 | NA | | 2.52E+04 | | 2.5E+04 | 1.0E+04 | O,T |
| TPH-GRO (C6-C10) | | | | | | | 5.1E+03 | 5.1E+03 | |
| TPH-DRO (C10-C28) | | | | | | | 5.1E+03 | 5.1E+03 | |
| TPH-ORO (>C28) | | | | | | | 2.5E+04 | 1.0E+04 | |

LDEQ RECAP
WORKSHEET I6
SOILGW and SOILsat
(mg/kg)

Appendix I **SoilGW & Soilsat**
Revision Date: 08/04/2003 Run date: 10/16/2003

SoilGW1 = DFsummers*(GW1*(pb*Koc*foc+nw+na*H*41))/(pb)
SoilGW2 = DFsummers*(GW2*(pb*Koc*foc+nw+na*H*41))/(pb)
SoilGW3NDW =DFsummers* (GW3NDW*(pb*Koc*foc+nw+na*H*41))/(pb)
SoilGW3DW =DFsummers* (GW3DW*(pb*Koc*foc+nw+na*H*41))/(pb)

Soilsat = S*(Koc*foc*pb+nw+H*41*na)/pb

| | **SoilGW1** | **SoilGW2** | **SoilGW3DW** | **SoilGW3NDW** | **Soilsat** |
|---|---|---|---|---|---|
| **COMPOUND** | **(mg/kg)** | **(mg/kg)** | **(mg/kg)** | **(mg/kg)** | **(mg/kg)** |
| Acenaphthene | 2.2E+02 | 2.2E+02 | #NAME? | #NAME? | NA |
| Acenaphthylene | 8.8E+01 | 8.8E+01 | #NAME? | #NAME? | NA |
| Anthracene | 1.2E+02 | 1.2E+02 | #NAME? | #NAME? | NA |
| Benzene | 5.1E-02 | 5.1E-02 | #NAME? | #NAME? | 9.0E+02 |
| Benz(a)anthracene | 3.3E+02 | #NAME? | #NAME? | #NAME? | NA |
| Benzo(a)pyrene | 2.3E+01 | 2.3E+01 | #NAME? | #NAME? | NA |
| Benzo(b)fluoranthene | 2.2E+02 | #NAME? | #NAME? | #NAME? | NA |
| Benzo(k)fluoranthene | 1.2E+02 | #NAME? | #NAME? | #NAME? | NA |
| Chrysene | 7.6E+01 | 7.6E+01 | #NAME? | #NAME? | NA |
| Dibenz(a,h)anthracene | 5.4E+02 | #NAME? | #NAME? | #NAME? | NA |
| Ethyl benzene | 1.9E+01 | 1.9E+01 | #NAME? | #NAME? | 2.3E+02 |
| Fluoranthene | 1.2E+03 | 1.2E+03 | #NAME? | #NAME? | NA |
| Fluorene | 2.3E+02 | 2.3E+02 | #NAME? | #NAME? | NA |
| Indeno(1,2,3-cd)pyrene | 9.2E+00 | #NAME? | #NAME? | #NAME? | NA |
| Lead (inorganic) | NA | NA | NA | NA | NA |
| Methyl ethyl ketone | 5.0E+00 | 5.0E+00 | #NAME? | #NAME? | 2.9E+04 |
| Methyl isobutyl ketone | 6.4E+00 | 6.4E+00 | #NAME? | #NAME? | 3.1E+03 |
| Methylnaphthalene,2- | 1.7E+00 | 1.7E+00 | #NAME? | #NAME? | NA |
| MTBE (methyl tert-butyl ether) | 7.7E-02 | 7.7E-02 | #NAME? | #NAME? | 9.8E+03 |
| Naphthalene | 1.5E+00 | #NAME? | #NAME? | #NAME? | NA |
| Phenanthrene | 6.6E+02 | 6.6E+02 | #NAME? | #NAME? | NA |
| Pyrene | 1.1E+03 | 1.1E+03 | #NAME? | #NAME? | NA |
| Toluene | 2.0E+01 | 2.0E+01 | #NAME? | #NAME? | 5.2E+02 |

LDEQ RECAP
WORKSHEET I6
SOILGW and SOILsat
(mg/kg)

Appendix I **SoilGW & Soilsat**
Revision Date: 08/04/2003 Run date: 10/16/2003

SoilGW1 = DFsummers*(GW1*(pb*Koc*foc+nw+na*H*41))/(pb)
SoilGW2 = DFsummers*(GW2*(pb*Koc*foc+nw+na*H*41))/(pb)
SoilGW3NDW =DFsummers* (GW3NDW*(pb*Koc*foc+nw+na*H*41))/(pb)
SoilGW3DW =DFsummers* (GW3DW*(pb*Koc*foc+nw+na*H*41))/(pb)

Soilsat = S*(Koc*foc*pb+nw+H*41*na)/pb

| | SoilGW1 | SoilGW2 | SoilGW3DW | SoilGW3NDW | Soilsat |
|---|---|---|---|---|---|
| **COMPOUND** | **(mg/kg)** | **(mg/kg)** | **(mg/kg)** | **(mg/kg)** | **(mg/kg)** |
| Xylene(mixed) | 1.8E+02 | 1.8E+02 | #NAME? | #NAME? | 1.5E+02 |
| Aliphatics C6-C8 | 1.8E+04 | 1.8E+04 | #NAME? | #NAME? | NA |
| Aliphatics >C8-C10 | 5.3E+03 | 5.3E+03 | #NAME? | #NAME? | NA |
| Aliphatics >C10-C12 | 4.2E+04 | 4.2E+04 | #NAME? | #NAME? | NA |
| Aliphatics >C12-C16 | 8.2E+05 | 8.2E+05 | #NAME? | #NAME? | NA |
| Aliphatics >C16-C35 | 5.5E+09 | 5.5E+09 | #NAME? | #NAME? | NA |
| Aromatics >C8-C10 | 6.5E+01 | 6.5E+01 | #NAME? | #NAME? | NA |
| Aromatics >C10-C12 | 1.0E+02 | 1.0E+02 | #NAME? | #NAME? | NA |
| Aromatics >C12-C16 | 2.0E+02 | 2.0E+02 | #NAME? | #NAME? | NA |
| Aromatics >C16-C21 | 2.1E+03 | 2.1E+03 | #NAME? | #NAME? | NA |
| Aromatics >C21-C35 | 1.7E+04 | 1.7E+04 | #NAME? | #NAME? | NA |
| TPH-GRO (C6-C10) | 6.5E+01 | 6.5E+01 | #NAME? | #NAME? | |
| TPH-DRO (C10-C28) | 6.5E+01 | 6.5E+01 | #NAME? | #NAME? | |
| TPH-ORO (>C28) | 1.7E+04 | 1.7E+04 | #NAME? | #NAME? | |