

Table 2

## Non-residential Ingestion-Dermal Soil Remediation Standards (mg/kg)

| <b>Contaminant</b>                           | <b>CAS No.</b> | <b>Carcinogenic<br/>Ingestion-<br/>Dermal<br/>Human<br/>Health-based<br/>Criterion</b> | <b>Non-<br/>carcinogenic<br/>Ingestion-<br/>Dermal<br/>Human<br/>Health-based<br/>Criterion</b> | <b>Soil<br/>Reporting<br/>Limit</b> | <b>Non-<br/>residential<br/>Ingestion-<br/>Dermal Soil<br/>Remediation<br/>Standard</b> |
|----------------------------------------------|----------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------|
| Acenaphthene                                 | 83-32-9        | NA                                                                                     | 50,000                                                                                          | 0.17                                | 50,000                                                                                  |
| Acetone (2-Propanone)                        | 67-64-1        | NA                                                                                     | 1,200,000                                                                                       | 0.01                                | NA <sup>1</sup>                                                                         |
| Acetophenone                                 | 98-86-2        | NA                                                                                     | 130,000                                                                                         | 0.33                                | 130,000                                                                                 |
| Aldrin                                       | 309-00-2       | 0.15                                                                                   | 27                                                                                              | 0.002                               | 0.15                                                                                    |
| Aluminum (total)                             | 7429-90-5      | NA                                                                                     | 1,300,000                                                                                       | 20                                  | NA <sup>1</sup>                                                                         |
| Anthracene                                   | 120-12-7       | NA                                                                                     | 250,000                                                                                         | 0.17                                | 250,000                                                                                 |
| Antimony (total)                             | 7440-36-0      | NA                                                                                     | 520                                                                                             | 1                                   | 520                                                                                     |
| Arsenic (total)                              | 7440-38-2      | 2.1                                                                                    | 350                                                                                             | 0.5                                 | 19 <sup>2</sup>                                                                         |
| Atrazine                                     | 1912-24-9      | NA                                                                                     | 3,200                                                                                           | 0.33                                | 3,200                                                                                   |
| Barium (total)                               | 7440-39-3      | NA                                                                                     | 260,000                                                                                         | 5                                   | 260,000                                                                                 |
| Benzaldehyde                                 | 100-52-7       | NA                                                                                     | 130,000                                                                                         | 0.33                                | 130,000                                                                                 |
| Benzene                                      | 71-43-2        | 16                                                                                     | 5,200                                                                                           | 0.005                               | 16                                                                                      |
| Benzo(a)anthracene (1,2-Benzanthracene)      | 56-55-3        | 3.2                                                                                    | NA                                                                                              | 0.17                                | 3.2                                                                                     |
| Benzo(a)pyrene                               | 50-32-8        | 0.32                                                                                   | NA                                                                                              | 0.17                                | 0.32                                                                                    |
| Benzo(b)fluoranthene (3,4-Benzofluoranthene) | 205-99-2       | 3.2                                                                                    | NA                                                                                              | 0.17                                | 3.2                                                                                     |
| Benzo(k)fluoranthene                         | 207-08-9       | 32                                                                                     | NA                                                                                              | 0.17                                | 32                                                                                      |
| Beryllium                                    | 7440-41-7      | NA                                                                                     | 2,600                                                                                           | 0.5                                 | 2,600                                                                                   |
| 1,1'-Biphenyl                                | 92-52-4        | 450                                                                                    | 650,000                                                                                         | 0.17                                | 450                                                                                     |
| Bis(2-chloroethoxy)methane                   | 111-91-1       | NA                                                                                     | 2,700                                                                                           | 0.17                                | 2,700                                                                                   |
| Bis(2-chloroethyl)ether                      | 111-44-4       | 3.3                                                                                    | NA                                                                                              | 0.33                                | 3.3                                                                                     |
| Bis(2-ethylhexyl)phthalate                   | 117-81-7       | 180                                                                                    | 18,000                                                                                          | 0.17                                | 180                                                                                     |
| Bromodichloromethane (Dichlorobromomethane)  | 75-27-4        | 59                                                                                     | 26,000                                                                                          | 0.005                               | 59                                                                                      |
| Bromoform                                    | 75-25-2        | 320                                                                                    | 18,000                                                                                          | 0.005                               | 320                                                                                     |
| Bromomethane (Methyl bromide)                | 74-83-9        | NA                                                                                     | 1,800                                                                                           | 0.005                               | 1,800                                                                                   |
| 2-Butanone (Methyl ethyl ketone) (MEK)       | 78-93-3        | NA                                                                                     | 780,000                                                                                         | 0.01                                | 780,000                                                                                 |
| Butylbenzyl phthalate                        | 85-68-7        | 1,300                                                                                  | 180,000                                                                                         | 0.17                                | 1,300                                                                                   |
| Cadmium                                      | 7440-43-9      | NA                                                                                     | 1,100                                                                                           | 0.5                                 | 1,100                                                                                   |
| Caprolactam                                  | 105-60-2       | NA                                                                                     | 460,000                                                                                         | 0.33                                | 460,000                                                                                 |
| Carbon disulfide                             | 75-15-0        | NA                                                                                     | NA                                                                                              | 0.005                               | NA                                                                                      |
| Carbon tetrachloride                         | 56-23-5        | 40                                                                                     | 5,200                                                                                           | 0.005                               | 40                                                                                      |

| <b>Contaminant</b>                                  | <b>CAS No.</b> | <b>Carcinogenic Ingestion-Dermal Human Health-based Criterion</b> | <b>Non-carcinogenic Ingestion-Dermal Human Health-based Criterion</b> | <b>Soil Reporting Limit</b> | <b>Non-residential Ingestion-Dermal Soil Remediation Standard</b> |
|-----------------------------------------------------|----------------|-------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------|
| Chlordane (alpha and gamma forms summed)            | 57-74-9        | 1.4                                                               | 550                                                                   | 0.002                       | 1.4                                                               |
| 4-Chloroaniline                                     | 106-47-8       | 13                                                                | 3,600                                                                 | 0.17                        | 13                                                                |
| Chlorobenzene                                       | 108-90-7       | NA                                                                | 8,400                                                                 | 0.005                       | 8,400                                                             |
| Chloroethane (Ethyl chloride)                       | 75-00-3        | NA                                                                | NA                                                                    | 0.005                       | NA                                                                |
| Chloroform                                          | 67-66-3        | NA                                                                | 13,000                                                                | 0.005                       | 13,000                                                            |
| Chloromethane (Methyl chloride)                     | 74-87-3        | NA                                                                | NA                                                                    | 0.005                       | NA                                                                |
| 2-Chloronaphthalene                                 | 91-58-7        | NA                                                                | 100,000                                                               | 0.17                        | 100,000                                                           |
| 2-Chlorophenol (o-Chlorophenol)                     | 95-57-8        | NA                                                                | 6,500                                                                 | 0.17                        | 6,500                                                             |
| Chrysene                                            | 218-01-9       | 320                                                               | NA                                                                    | 0.17                        | 320                                                               |
| Cobalt (total)                                      | 7440-48-4      | NA                                                                | 390                                                                   | 0.5                         | 390                                                               |
| Copper (total)                                      | 7440-50-8      | NA                                                                | 52,000                                                                | 1                           | 52,000                                                            |
| Cyanide                                             | 57-12-5        | NA                                                                | 780                                                                   | 0.5                         | 780                                                               |
| Cyclohexane                                         | 110-82-7       | NA                                                                | NA                                                                    | 0.005                       | NA                                                                |
| 4,4'-DDD (p,p'-TDE)                                 | 72-54-8        | 11                                                                | NA                                                                    | 0.003                       | 11                                                                |
| 4,4'-DDE (p,p'-DDX)                                 | 72-55-9        | 7.5                                                               | NA                                                                    | 0.003                       | 7.5                                                               |
| 4,4'-DDT                                            | 50-29-3        | 9.5                                                               | 580                                                                   | 0.003                       | 9.5                                                               |
| Dibenz(a,h)anthracene                               | 53-70-3        | 0.32                                                              | NA                                                                    | 0.17                        | 0.32                                                              |
| Dibromochloromethane (Chlorodibromomethane)         | 124-48-1       | 30                                                                | 18,000                                                                | 0.005                       | 30                                                                |
| 1,2-Dibromo-3-chloropropane                         | 96-12-8        | 4.5                                                               | 260                                                                   | 0.005                       | 4.5                                                               |
| 1,2-Dibromoethane (Ethylene dibromide)              | 106-93-4       | 1.8                                                               | 12,000                                                                | 0.005                       | 1.8                                                               |
| 1,2-Dichlorobenzene (o-Dichlorobenzene)             | 95-50-1        | NA                                                                | 110,000                                                               | 0.005                       | 110,000                                                           |
| 1,3-Dichlorobenzene (m-Dichlorobenzene)             | 541-73-1       | NA                                                                | 110,000                                                               | 0.005                       | 110,000                                                           |
| 1,4-Dichlorobenzene (p-Dichlorobenzene)             | 106-46-7       | NA                                                                | 13,000                                                                | 0.005                       | 13,000                                                            |
| 3,3'-Dichlorobenzidine                              | 91-94-1        | 5.7                                                               | NA                                                                    | 0.33                        | 5.7                                                               |
| Dichlorodifluoromethane (Freon 12)                  | 75-71-8        | NA                                                                | 260,000                                                               | 0.005                       | 260,000                                                           |
| 1,1-Dichloroethane                                  | 75-34-3        | 640                                                               | 260,000                                                               | 0.005                       | 640                                                               |
| 1,2-Dichloroethane                                  | 107-06-2       | 30                                                                | NA                                                                    | 0.005                       | 30                                                                |
| 1,1-Dichloroethene (1,1-Dichloroethylene)           | 75-35-4        | NA                                                                | 180                                                                   | 0.005                       | 180                                                               |
| 1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)   | 156-59-2       | NA                                                                | 13,000                                                                | 0.005                       | 13,000                                                            |
| 1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene) | 156-60-5       | NA                                                                | 22,000                                                                | 0.005                       | 22,000                                                            |

| <b>Contaminant</b>                                             | <b>CAS No.</b> | <b>Carcinogenic Ingestion-Dermal Human Health-based Criterion</b> | <b>Non-carcinogenic Ingestion-Dermal Human Health-based Criterion</b> | <b>Soil Reporting Limit</b> | <b>Non-residential Ingestion-Dermal Soil Remediation Standard</b> |
|----------------------------------------------------------------|----------------|-------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------|
| 2,4-Dichlorophenol                                             | 120-83-2       | NA                                                                | 2,700                                                                 | 0.17                        | 2,700                                                             |
| 1,2-Dichloropropane                                            | 78-87-5        | 100                                                               | 120,000                                                               | 0.005                       | 100                                                               |
| 1,3-Dichloropropene (total)                                    | 542-75-6       | 36                                                                | 39,000                                                                | 0.005                       | 36                                                                |
| Dieldrin                                                       | 60-57-1        | 0.16                                                              | 46                                                                    | 0.003                       | 0.16                                                              |
| Diethylphthalate                                               | 84-66-2        | NA                                                                | 730,000                                                               | 0.17                        | 730,000                                                           |
| 2,4-Dimethylphenol                                             | 105-67-9       | NA                                                                | 18,000                                                                | 0.17                        | 18,000                                                            |
| Di-n-butyl phthalate                                           | 84-74-2        | NA                                                                | 91,000                                                                | 0.17                        | 91,000                                                            |
| 2,4-Dinitrophenol                                              | 51-28-5        | NA                                                                | 1,800                                                                 | 0.33                        | 1,800                                                             |
| 2,4-Dinitrotoluene/2,6-Dinitrotoluene (mixture)                | 25321-14-6     | 3.8                                                               | NA                                                                    | 0.17                        | 3.8                                                               |
| Di-n-octyl phthalate                                           | 117-84-0       | NA                                                                | 9,100                                                                 | 0.33                        | 9,100                                                             |
| 1,4-Dioxane                                                    | 123-91-1       | 26                                                                | 27,000                                                                | 0.067                       | 26                                                                |
| Endosulfan I and Endosulfan II (alpha and beta) (summed)       | 115-29-7       | NA                                                                | 5,500                                                                 | 0.003                       | 5,500                                                             |
| Endrin                                                         | 72-20-8        | NA                                                                | 270                                                                   | 0.003                       | 270                                                               |
| Ethylbenzene                                                   | 100-41-4       | NA                                                                | 130,000                                                               | 0.005                       | 130,000                                                           |
| Extractable Petroleum Hydrocarbons (No. 2 Fuel Oil and Diesel) | various        | NA                                                                | 75,000 <sup>3</sup>                                                   | 80                          | 75,000 <sup>3</sup>                                               |
| Extractable Petroleum Hydrocarbons (Other)                     | various        | NA                                                                | Sample-specific <sup>4</sup>                                          | 80                          | Sample-specific <sup>4</sup>                                      |
| Fluoranthene                                                   | 206-44-0       | NA                                                                | 33,000                                                                | 0.33                        | 33,000                                                            |
| Fluorene                                                       | 86-73-7        | NA                                                                | 33,000                                                                | 0.17                        | 33,000                                                            |
| alpha-HCH (alpha-BHC)                                          | 319-84-6       | 0.41                                                              | 7,300                                                                 | 0.002                       | 0.41                                                              |
| beta-HCH (beta-BHC)                                            | 319-85-7       | 1.4                                                               | NA                                                                    | 0.002                       | 1.4                                                               |
| Heptachlor                                                     | 76-44-8        | 0.57                                                              | 460                                                                   | 0.002                       | 0.57                                                              |
| Heptachlor epoxide                                             | 1024-57-3      | 0.28                                                              | 12                                                                    | 0.002                       | 0.28                                                              |
| Hexachlorobenzene                                              | 118-74-1       | 1.6                                                               | 730                                                                   | 0.17                        | 1.6                                                               |
| Hexachloro-1,3-butadiene                                       | 87-68-3        | 33                                                                | 910                                                                   | 0.17                        | 33                                                                |
| Hexachlorocyclopentadiene                                      | 77-47-4        | NA                                                                | 5,500                                                                 | 0.33                        | 5,500                                                             |
| Hexachloroethane                                               | 67-72-1        | 64                                                                | 640                                                                   | 0.17                        | 64                                                                |
| n-Hexane                                                       | 110-54-3       | NA                                                                | 78,000                                                                | -                           | 78,000                                                            |
| 2-Hexanone                                                     | 591-78-6       | NA                                                                | 6,500                                                                 | 0.01                        | 6,500                                                             |
| Indeno(1,2,3-cd)pyrene                                         | 193-39-5       | 3.2                                                               | NA                                                                    | 0.17                        | 3.2                                                               |
| Isophorone                                                     | 78-59-1        | 2,700                                                             | 180,000                                                               | 0.17                        | 2,700                                                             |
| Isopropylbenzene                                               | 98-82-8        | NA                                                                | 130,000                                                               | 0.005                       | 130,000                                                           |
| Lead (total)                                                   | 7439-92-1      | NA                                                                | NA                                                                    | 0.5                         | 800 <sup>5</sup>                                                  |
| Lindane (gamma-HCH)(gamma-BHC)                                 | 58-89-9        | 2.3                                                               | 270                                                                   | 0.002                       | 2.3                                                               |

| <b>Contaminant</b>                            | <b>CAS No.</b> | <b>Carcinogenic Ingestion-Dermal Human Health-based Criterion</b> | <b>Non-carcinogenic Ingestion-Dermal Human Health-based Criterion</b> | <b>Soil Reporting Limit</b> | <b>Non-residential Ingestion-Dermal Soil Remediation Standard</b> |
|-----------------------------------------------|----------------|-------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------|
| Manganese (total)                             | 7439-96-5      | NA                                                                | 31,000                                                                | 0.5                         | 31,000                                                            |
| Mercury (total)                               | 7439-97-6      | NA                                                                | 390                                                                   | 0.1                         | 390                                                               |
| Methoxychlor                                  | 72-43-5        | NA                                                                | 4,600                                                                 | 0.02                        | 4,600                                                             |
| Methyl acetate                                | 79-20-9        | NA                                                                | 1,300,000                                                             | 0.005                       | NA <sup>1</sup>                                                   |
| Methylene chloride (Dichloromethane)          | 75-09-2        | 260                                                               | 7,800                                                                 | 0.005                       | 260                                                               |
| 2-Methylnaphthalene                           | 91-57-6        | NA                                                                | 3300                                                                  | 0.17                        | 3300                                                              |
| 4-Methyl-2-pentanone (MIBK)                   | 108-10-1       | NA                                                                | 100,000                                                               | 0.01                        | 100,000                                                           |
| 2-Methylphenol (o-cresol)                     | 95-48-7        | NA                                                                | 4,600                                                                 | 0.33                        | 4,600                                                             |
| 4-Methylphenol (p-cresol)                     | 106-44-5       | NA                                                                | 9,100                                                                 | 0.33                        | 9,100                                                             |
| Methyl tert-butyl ether (MTBE)                | 1634-04-4      | NA                                                                | 13,000                                                                | 0.005                       | 13,000                                                            |
| Naphthalene                                   | 91-20-3        | NA                                                                | 34,000                                                                | 0.17                        | 34,000                                                            |
| Nickel (total)                                | 7440-02-0      | NA                                                                | 26,000                                                                | 0.5                         | 26,000                                                            |
| 4-Nitroaniline                                | 100-01-6       | 130                                                               | 3,600                                                                 | 0.33                        | 130                                                               |
| Nitrobenzene                                  | 98-95-3        | NA                                                                | 2,600                                                                 | 0.17                        | 2,600                                                             |
| N-Nitrosodi-n-propylamine                     | 621-64-7       | 0.36                                                              | NA                                                                    | 0.17                        | 0.36                                                              |
| N-Nitrosodiphenylamine                        | 86-30-6        | 520                                                               | NA                                                                    | 0.17                        | 520                                                               |
| 2,2'-oxybis(1-chloropropane)                  | 108-60-1       | NA                                                                | 52,000                                                                | 0.33                        | 52,000                                                            |
| Pentachlorophenol                             | 87-86-5        | 4.4                                                               | 3,200                                                                 | 0.33                        | 4.4                                                               |
| Phenol                                        | 108-95-2       | NA                                                                | 270,000                                                               | 0.33                        | 270,000                                                           |
| Polychlorinated biphenyls (PCBs)              | 1336-36-3      | 1.1                                                               | NA                                                                    | 0.03                        | 1.1                                                               |
| Pyrene                                        | 129-00-0       | NA                                                                | 25,000                                                                | 0.17                        | 25,000                                                            |
| Selenium (total)                              | 7782-49-2      | NA                                                                | 6,500                                                                 | 2.5                         | 6,500                                                             |
| Silver (total)                                | 7440-22-4      | NA                                                                | 6,500                                                                 | 0.5                         | 6,500                                                             |
| Styrene                                       | 100-42-5       | NA                                                                | 260,000                                                               | 0.005                       | 260,000                                                           |
| Tertiary butyl alcohol (TBA)                  | 75-65-0        | NA                                                                | 23,000                                                                | 0.1                         | 23,000                                                            |
| 1,2,4,5-Tetrachlorobenzene                    | 95-94-3        | NA                                                                | 270                                                                   | 0.17                        | 270                                                               |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin           | 1746-01-6      | NA                                                                | 0.00081                                                               | 0.000001                    | 0.00081 <sup>6</sup>                                              |
| 1,1,2,2-Tetrachloroethane                     | 79-34-5        | 18                                                                | 26,000                                                                | 0.005                       | 18                                                                |
| Tetrachloroethene (PCE) (Tetrachloroethylene) | 127-18-4       | 1,700                                                             | 7,800                                                                 | 0.005                       | 1,700                                                             |
| 2,3,4,6-Tetrachlorophenol                     | 58-90-2        | NA                                                                | 27,000                                                                | 0.17                        | 27,000                                                            |
| Toluene                                       | 108-88-3       | NA                                                                | 100,000                                                               | 0.005                       | 100,000                                                           |
| Toxaphene                                     | 8001-35-2      | 2.3                                                               | NA                                                                    | 0.2                         | 2.3                                                               |
| 1,2,4-Trichlorobenzene                        | 120-82-1       | NA                                                                | 9,100                                                                 | 0.005                       | 9,100                                                             |
| 1,1,1-Trichloroethane                         | 71-55-6        | NA                                                                | 2,600,000                                                             | 0.005                       | NA <sup>1</sup>                                                   |
| 1,1,2-Trichloroethane                         | 79-00-5        | 64                                                                | 5,200                                                                 | 0.005                       | 64                                                                |

| <b>Contaminant</b>                                  | <b>CAS No.</b> | <b>Carcinogenic Ingestion-Dermal Human Health-based Criterion</b> | <b>Non-carcinogenic Ingestion-Dermal Human Health-based Criterion</b> | <b>Soil Reporting Limit</b> | <b>Non-residential Ingestion-Dermal Soil Remediation Standard</b> |
|-----------------------------------------------------|----------------|-------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------|
| Trichloroethene (TCE)<br>(Trichloroethylene)        | 79-01-6        | 79                                                                | 650                                                                   | 0.005                       | 79                                                                |
| Trichlorofluoromethane (Freon 11)                   | 75-69-4        | NA                                                                | 390,000                                                               | 0.005                       | 390,000                                                           |
| 2,4,5-Trichlorophenol                               | 95-95-4        | NA                                                                | 91,000                                                                | 0.2                         | 91,000                                                            |
| 2,4,6-Trichlorophenol                               | 88-06-2        | 230                                                               | 910                                                                   | 0.2                         | 230                                                               |
| 1,1,2-Trichloro-1,2,2-trifluoroethane<br>(Freon TF) | 76-13-1        | NA                                                                | NA                                                                    | 0.005                       | NA                                                                |
| 1,2,4-Trimethylbenzene                              | 95-63-6        | NA                                                                | NA                                                                    | 0.076                       | NA                                                                |
| Vanadium (total)                                    | 7440-62-2      | NA                                                                | 6,500                                                                 | 2.5                         | 6,500                                                             |
| Vinyl chloride                                      | 75-01-4        | 5.0                                                               | 3,900                                                                 | 0.005                       | 5.0                                                               |
| Xylenes (total)                                     | 1330-20-7      | NA                                                                | 190,000                                                               | 0.005                       | 190,000                                                           |
| Zinc (total)                                        | 7440-66-6      | NA                                                                | 390,000                                                               | 1                           | 390,000                                                           |

NA = Appropriate toxicological information not available or standard not applicable

1 – Standard not applicable because health-based criterion exceeds one million mg/kg

2 – Standard is based on natural background

3 – Special calculation for EPH– see Appendix 2

4 – Sample-specific calculation using EPH calculator – see Appendix 2

5 – Standard based on the Adult Lead Model (ALM)

6 – This standard is used for comparison to site soil data that have been converted to sample-specific TCDD-TEQ values through application of the Toxicity Equivalence Factor

Methodology (USEPA 2010) and using the WHO 2005 Mammalian Toxic Equivalency Factors (TEFs).