

Georgia Environmental Protection Division
Risk Assessment Program
Approved Chemical Surrogates

| Chemical | CAS # | Surrogate Chemical | Surrogate CAS # | Rationale |
|-----------------------------|------------|-----------------------------|-----------------|--|
| 1,3-Dichlorobenzene | 541-73-1 | 1,4-Dichlorobenzene | 106-46-7 | Per EPA Region 4, assess non-cancer endpoint only and discuss cancer endpoint qualitatively in uncertainty section. Due to the uncertainty surrounding the Cal EPA cancer-based toxicity values for 1,4-DCB, EPA Region 4 recommends that 1,3-DCB be evaluated using the non-cancer toxicity values of its surrogate 1,4-DCB only and that cancer risk not be calculated using the cancer-based surrogate toxicity values. |
| 2,2-Dichloropropane | 594-20-7 | 1,2-Dichloropropane | 78-87-5 | Structurally similar |
| 2-Nitrophenol | 88-75-5 | 2,4-Dinitrophenol | 51-28-5 | |
| 4-Chlorophenyl phenyl ether | | Methoxychlor | | |
| 4-Chlorophenyl phenyl ether | 7005-72-3 | Bis(2-Chloroethyl)ether | 111-44-4 | Structurally similar |
| 4-Nitrophenol | 100-02-7 | 2,4-Dinitrophenol | 51-28-5 | Structurally similar |
| Acenaphthylene | 208-96-8 | Acenaphthene | 83-32-9 | Similar structure, PAHs |
| Benzo(g,h,i)perylene | 191-24-2 | Pyrene | 129-00-0 | PAHs, Pyrene has a low reference dose making it a conservative surrogate. |
| Bromodiphenyl Ether | 101-55-3 | Diphenyl ether | 101-84-8 | Structurally similar |
| Carbazole | 86-74-8 | Fluorene | 86-73-7 | Per Recommendation by EPA Region 4 from the EPA-ORD Health Risk Tech Support Center Correspondence dated March 8, 2023. |
| delta-Hexachlorocyclohexane | 319-86-8 | alpha-Hexachlorocyclohexane | 319-84-6 | Isomer of Hexachlorocyclohexane, Alpha-hexachlorocyclohexane is the more conservative isomer. |
| Dimethyl phthalate | 131-11-3 | Diethyl phthalate | 84-66-2 | Structurally similar |
| Endosulfan I, Endosulfan II | 959-98-8 | Endosulfan | 115-29-7 | Endrin I, Endrin II, and Endosulfan sulfate are isomers of Endosulfan, similar structure. |
| Endrin aldehyde | 7421-93-4 | Endrin | 72-20-8 | Similar structure |
| Endrin Ketone | 53494-70-5 | Endrin | 72-20-8 | Similar structure |
| gamma-chlordane | 5103-74-2 | Chlordane | 57-74-9 | Gamma-Chlordane is an isomer of Chlordane. |
| Methylcyclohexane | 108-87-2 | Cyclohexane | 110-82-7 | Similar structure |
| Phenanthrene | 85-01-8 | Pyrene | 129-00-0 | PAHs, Pyrene has a low reference dose making it a conservative surrogate. |