

been made sufficiently sensitive for the resulting criteria to act as relatively conservative screening values.

An important *proviso* in this is that the Atkins' screening criteria should only be applied where actual site conditions have been checked by a risk assessment specialist against the hypothetical conceptual model and it is clear that there are no pathways relevant to the site that might have been overlooked or underestimated by the generic assumptions.

Atkins adapted the RISC Workbench risk assessment model to be compliant with the requirements of CLR7-10, including alignment of receptor characteristics to UK default values and the toxicological approach. RISC Workbench was selected by virtue of the algorithms incorporated within it and because it is a scientifically robust and peer reviewed quantitative human health risk assessment tool. This has enabled Atkins to generate a series of soil screening values (SSVs) for a range of contaminants for which CLEA SGVs do not exist at present. In addition, the contaminant source zone is larger and closer to the surface than is assumed in the CLR 10 default case.

Since their inception, Atkins SSVs have been kept updated to reflect changes made by the Environment Agency to a number of areas of the CLEA model. The Environment Agency has released CLEA Briefing Notes which detail adaptations to the building parameters for the vapour pathway, changes to the conceptual exposure models for building vapour intrusion (including adoption of the Johnson and Ettinger model), associated soil parameters and modification of the dermal exposure pathway.

SSVs have been generated for over 40 contaminants. These include:

- benzene, xylene;
- polycyclic aromatic hydrocarbons (PAHs) - acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, chrysene, dibenzo(ah)anthracene, fluorene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, pyrene;
- tetrachloroethene;
- trichloroethene;
- 1,1,1-trichloroethane;
- 1,1,2,2 and 1,1,1,2-tetrachloroethane;
- free cyanide;
- copper; and