

## ERRATA

An error has recently been identified in Table B-1 of the DoD Vapor Intrusion Handbook. This table was designed to identify those chemicals that are both sufficiently toxic and sufficiently volatile to pose a potential VI threat. The primary method used to identify whether a chemical is "sufficiently volatile" is its Henry's Law constant. Unfortunately, Table B-1 presents the wrong version of the Henry's Law constant and erroneously identifies certain chemicals as volatile when they are not.

What appears to have happened in the DoD VI guidance was that the unitless Henry's Law constant ( $H'$ ) was used rather than the Henry's Law constant with the units of atm-m<sup>3</sup>/mole. Therefore, the wrong HL constant, with the wrong numerical value, is reported in Table B-1. The EPA 2002 VI guidance, and many states, use  $10^{-5}$  atm-m<sup>3</sup>/mole as the criteria for identifying VOCs.

One specific misidentified compound is NDMA (nitrosodimethylamine, N-) on pg 76 of the 2009 DoD VI Handbook. Table B-1 lists a Henry's Law value of  $7.4E-05$  for  $H'$ , leading to the erroneous conclusion that NDMA is "sufficiently volatile." The correct Henry's Law constant for NDMA, in atm-m<sup>3</sup>/mole, is  $1.8E-06$  (from the EPA RSL Support Tables, Nov 2011). Using the correct Henry's Law constant would conclude that NDMA is non-volatile.

The California DTSC has identified NDMA as a VI chemical of concern and is attributing the DoD Handbook as a reason for identifying it as "sufficiently volatile." This is clearly an error in the handbook. This minor mistake may contribute to incorrectly identifying VOCs at other sites and perhaps lead to unnecessary investigations.

It was not the intent for bases and managers to use this handbook as prescriptive guidance, but rather it was designed as an educational tool to provide background and support to agency guidance. Nonetheless, at least in California, an agency is using our guidance to expand an investigation based on an error.